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ABSTRACT

This report contains a literature search that was prepared as part of a statewide study undertaken to gather, from all relevant groups of professionals and lay representatives, statements of elements thought to be critical to the operation of successful Title I reading programs. Following an introductory chapter, four chapters provide information drawn from the literature concerning school and community involvement in Title I programs, staffing of and participation in such programs, program content and goals, and program evaluation. (FL)

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STANDARDS FOR TITLE I
READING PROGRAMS

SUPPORT IN THE LITERATURE

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STANDARDS FOR TITLE I READING PROGRAM

SUPPORT IN THE LITERATURE

INTRODUCTION

The Title I Office of the Rhode Island Department of Education is currently conducting a study to establish validated criteria for the development, implementation and evaluation of Title I reading programs. This move to improve standards falls in the wake of Congressional action incorporated into the Education Amendments of 1974. Congress amended Title I to require the U. S. Commissioner of Education to:

--Develop and publish standards for evaluating program or project effectiveness in achieving the objectives of Title I.

--Provide to SEAs and LEAs models, including uniform procedures and criteria, for evaluating all programs conducted under Title I.

--Provide technical assistance and other assistance necessary to enable SEAs to assist LEAs in developing and applying systematic evaluations of programs in accordance with the models developed.

--Specify, for the models developed, objective criteria for evaluating all programs and outline techniques (such as longitudinal studies) and methodology (such as tests which yield comparable results) for producing comparable data on a statewide and nationwide basis.

By participating in the study, Rhode Islanders have the opportunity to impact on the development of criteria at the state level and, potentially, at the national level. Thus, it is a serious undertaking.

The study was designed to gather, from all relevant groups of professionals and parent representatives, statements of elements thought to be critical to the operation of successful Title I reading programs. This was accomplished at three regional meetings during the spring of 1976. Elected representatives of these groups then formed work committees to develop standards. Four work committees were established as the statements prepared by the participants at the regional meetings naturally fell into four general categories: involvement and communication, staffing and participation, program, and evaluation. The work committees formulated recommended standards.

This report on a literature search was prepared to be used at that point when standards have been written and are ready to be reviewed and, perhaps, refined. The literature reported provides a context within which individual recommendations can be evaluated or validated.

However, it should not be assumed that what is reported herein is a prescription for the future. It is difficult to find definite answers in the literature and no presumption is made relative to the quality of the synthesis of findings reported herein. Generalizations from even the best research are valid mainly for the populations sampled, under the specific conditions of the experiment. When research studies over a period of time yield similar conclusions, however, the findings can be considered more meaningful.

Another problem in summarizing what can be learned from the literature lies in the difficulty of isolating a single factor as the cause of gains in achievement. In reporting on four separate topics, as in this summary, it is difficult to decide in what area some studies should be reported. And, even when factors are isolated in the reports, it is obvious that many other variables are related to the outcomes.

The accumulation of evidence on Title I programs, for example, shows that successful programs have certain traits in common. In an Education U.S.A. special report on Compensatory Education: What Works to Help Disadvantaged Pupils (1973), USOE's Division of Compensatory Education is reported to have identified eight common characteristics after reviewing the following studies:

> Strategies of Compensation: A Review of Education Projects for the Disadvantaged in the United States (Organization for Economic Cooperation and Development, 1971)
>
> Compensatory Education: Evaluation in Perspective (Edmund W. Gordon, Information Retrieval Center on the Disadvantaged, 1970)
>
> How Effective Is Schooling? A Critical Review and Synthesis of Research Findings (Final Report to the President's Commission on School Finance, Rand Corp., 1971)
>
> ESEA Title I: A Reanalysis and Synthesis of Evaluation Data from Fiscal Year 1965 through 1970 (American Institutes for Research, 1972)
>
> Draft, Final Report, Exemplary Projects Studies (Columbia U., 1972)
>
> State Title I Evaluation Reports for FY 1972

In releasing information on successful programs, USOE warned that they were not to be thought of as discrete categories. They recognized, also, that a competent staff is an overriding characteristic. A proper mix of these characteristics with a committed competent staff was recommended as offering the greatest promise for success.

The eight "common characteristics" are the following:

> Systematic planning which begins with formal policy decisions to increase support for quality compensatory programs. "These decisions are the basis for the necessary partnerships among board members, educators and parents as they plan the program's design, implementation and evaluation."
>
> Clear objectives which must be clearly written and stated in specific measurable terms. Instructional techniques and materials must closely relate to those objectives.
>
> Intensity of treatment which includes the amount of time the child spends in the program and the staff/pupil ratio within the classroom. Here, USOE cited the wide variance in the number of instructional hours per week in the programs studied (from three-fourths of an hour per day twice weekly to seven hours a day, five days a week). Likewise, the staff/pupil ratio varied from 1:1 to 1:15.
>
> Attention to individual needs which includes a careful diagnosis and an individualized plan for each student.

Flexibility in grouping which allows staff opportunities to provide small group instruction and to teach frequently on a one-to-one basis. USOE notes that when group instruction was part of the daily program, it tended to be more effective if students were not confined to the same group for more than several days without reassessment of both the teachers' and students' strengths.

Personnel management which allows key staff personnel to work individually with teachers in the classroom. USOE stresses the need for much coordination and cooperation among staff members and a well designed inservice program.

Structured program approach which stresses sequential order and activities. Pupils must also receive frequent and immediate feedback.

Parental involvement which means the home must support what the child learns in school. Parents must also be committed to work as partners with school personnel and students.

These traits fit into the areas identified as a result of the regional meetings in Rhode Island and will be recognized in the literature reported.

Sources of Information

Several sources of information were used in gathering material for this study. Initially, five ERIC searchers were requested. These searches produced summaries of research announced in Research in Education, a monthly abstract and index journal. Included in the information package were citations from an ERIC index entitled Current Index to Journals in Education, a monthly guide to periodical literature with coverage of more than 600 major educational publications.

The ERIC searches were conducted using the following descriptors:

A. Remedial reading and - parent participation
- community involvement

B. Remedial reading and - professional personnel
- school personnel
- personnel selection

C. Remedial reading and - admission criteria

D. Remedial reading and
  - teaching methods
  - grouping
  - team teaching
  - individualized instruction
  - curriculum

E. Remedial reading and
  - evaluation
  - management

A second major source of information was the Reginald Corder study, The Information Base for Reading. Educational Testing Service of Berkeley, California was awarded the grant for this study by USOE to establish a foundation for the Targeted Program of Research and Development in Reading. Strict criteria were established in that project for reviewing the literature in reading. As a result, 1800 items survived the screening procedure out of the thousands of research abstracts, books and journal articles that had been collected for review. This was, perhaps, one of the most extensive literature searches ever conducted in the reading field. The findings from this study were reported in a 385 page document. This was carefully reviewed for information relative to the topics included in this paper.

A third source of information were the Alabama Right to Read studies:

--A Literature Search to Determine the Degree of Support for the Alabama Right to Read Criteria for Success

and

--Toward Consensus: The Alabama Delphi Study

The first of these studies was a literature search conducted by Project RISE (Research Information Services in Education) for the purpose of validating their criteria for local Right to Read programs. The second study was an effort to achieve a consensus on a rank ordering of priorities among the criteria to guide the state effort. The contents of these texts is summarized on charts in Appendices A and B.

In addition to the above, publications of the International Reading Association and other texts and journals in the field were reviewed. In the area of mastery learning, research abstracts collected by James Block and prepared by authorities in that area were reviewed. These authorities include Peter Airasian, James Block, Benjamin Bloom, Kenneth Collins, Mildred Kersh, Hogwon Kim, Christopher Modu, Kay Torshen, Robert Wise and William Wright. The original article by John Carroll, A Model of School Learning, which gave birth to the concept of mastery learning, was also used as a reference.

The resources of the Curriculum Research and Development Center were used in the area of evaluation. Information and documents were shared liberally.

This report is submitted with the hope that it will raise as many questions as it will answer. In each area, positions are taken which the bulk of the research seems to support. This is done intentionally to put into focus the bits of information gleaned from various studies, knowing well that others may make different inferences from the same pool of information. From a different vantage point, the information could be cast in a different perspective. Since there are no hard and fast answers in education, there is no one position to defend. The author felt it would be helpful to present a point of view and invite discussion. It is hoped that many educators will become involved and seek better answers. There is much to be learned. The more persons who share views, the more we shall all learn.

INVOLVEMENT AND COMMUNICATION

INVOLVEMENT AND COMMUNICATION

It is the responsibility of every community, within the framework of state regulations, to provide a school system that meets its needs and reasonable expectations for educating its youth. Only through involvement and communication between the community and school can that responsibility be met. The question addressed here is: What support can be found in the literature for the development of standards to guide professionals in establishing productive school-community relationships for Title I programs?

Background

Parent involvement in Title I programs is required by law. While it was considered desirable in the early years of the program, the 1970 amendments mandated it in the form of parent advisory councils. According to Holzman and Boes:

> Most of the studies of Head Start programs, which required parental involvement from the beginning, indicated that when parents were involved in the programs they tended to take a more positive attitude toward schools and learning. Also, the children of involved parents tended to be more positive toward school and seemed to have higher motivation toward learning success.[1]

Parents themselves recognized the need to take an active role in planning for their children. In the publication cited above, it was reported that in 1973 the National Advisory Council on Education of Disadvantaged Children held a conference for representatives of parent advisory groups. Experienced PAC members made the following suggestions:[2]

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[1] Holzman, Seymour and Shirley Boes. Compensatory Education: What Works to Help Disadvantaged Pupils. Education U.S.A. Special Report. Arlington, VA: National School Public Relations Association. 1973. p.7.

-Complete information and interpretation of Title I should be made available to every parent -- and especially to every PAC member.

-The needs of the children in a project should be assessed.

-The program should be designed to meet those needs.

-Parents should be given information on how children are identified as Title I participants.

According to Gordon and Breivogel, the skills parents need to work effectively in the school are the ability to deal with: state school law and its legal ramifications for situations under discussion, budgets, government jargon and group skills for running a meeting or conducting a discussion.

Positive Effects

Several indicators point to the positive effects of parent involvement. The first series of validated reading programs distributed by the OE/Right-to-Read Office in program information capsules featured five successful programs, all of which involved parents in one or more of several ways ranging from planning to direct classroom participation. A second series of programs, 12 in number, later identified as effective reading programs, again showed involvement as a feature in most of the programs. One of the most interesting of these sponsored child-parent centers in Chicago. They proved successful in bringing parents into the schools to learn parenting techniques while establishing a better home-school bond.

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[2] Ibid. p. 8

In Ohio[3] a primary-grade program that used many instructional techniques, a variety of teaching materials, techniques for providing feedback to the teacher and that also stressed parent involvement showed positive differences in word-analysis skills, oral reading, use of comprehension skills, and acceptance of the reading task responsibility. The greatest impact was at Grade 3.

In a Georgia school[4] in a poverty neighborhood, a special primary-grade program also featured parent involvement in designing a program to meet the needs of each child.

A project that carefully documented pupil achievement was Project REACH[5] in Cleveland. This K-3 project involved parents to help facilitate learning. Results indicated that 48-92 percent of pupils achieved marked or very marked improvement; 75 percent of teachers developed flexible teaching styles, and two out of every three pupils achieved successful reading performance in the classroom.

Parental involvement has been a factor in a great number of successful projects. In 1974, USOE's Division of Compensatory Education reported that of the eight characteristics of successful programs that they had been able to identify, one was parental involvement. It has been rationalized that for progress to take place, the home must support what the child learns in school. "Parents," according to USOE, "must also be committed to work as partners with school personnel and students."[6]

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[3] Logan, Juanita. Diagnositic Reading Clinic Title I Evaluation, 1972-1973. Cleveland Public Schools, Ohio.

[4] Plankenhorn, Andrew and Donna Sylvan. The Interdependent Learning Model and Achievement. Grant Park Primary Schoo, 1972-73.

[5] Logan, Juanita. Disadvantaged Pupil Program Funds Evaluation, 1971-72. Cleveland Public Schools, Ohio.

Problems

OE guidelines state that the goal of parental involvement should be to build the parents' capabilities of working with schools to support their children's well-being, growth and development. One of the problems with accomplishing the goal, however, was often found to be parent apathy.[7] Some reported reasons for apathy included:

- distance from school
- lack of interest since court-ordered integration
- resentment of the Federal Government's involvement in local affairs
- educational deprivation and their resulting lack of appreciation for children's academic needs.

Attempts to overcome apathy included the hiring by one LEA of a parent activity coordinator but only limited success was achieved. The one LEA that was reported to be successful launched an intensive effort by making home visits, submitting the Title I application to the parent advisory council for its review and approval, and asking the council to become involved in assessing the needs. These steps increased parent interest and involvement substantially.

SEA officials were reported to have offered suggestions such as providing more in-service training on how to get parents involved. This was thought to be necessary in view of HEW regional office reports disclosing the following weaknesses:

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[6] Dixon, Roger. Reading: Issues and Actions. Education U.S.A. Special Report. Arlington, VA: National School Public Relations Association. 1974. p. 41.

[7] OE. Assessment of Reading Activities Funded Under the Federal Program of Aid for Educationally Deprived Children. Report to the Congress by the Comptroller General of the United States. Dec. 12, 1975. p. 37

- -Parents were denied essential information about the program and did not receive copies of the law or regulations.
- -Parents of non-public school children were not involved in Title I activities.
- -LEA officials did not sufficiently try to assist the parent advisory council in carrying out its duties.

OE regional program officials emphasized to evaluators the need for SEA's to intensify their monitoring of the LEA's efforts.

To assist LEA's in improving parental involvement and overcoming parental disinterest, HEW will soon revise and disseminate its parent handbook. In addition, OE is gathering information on exemplary parental involvement components from local Title I projects in 13 states. Information on these will be disseminated.

Political Styles of Neighborhoods

There is some evidence in the literature to support organized parent involvement. Summerfield[8] describes four differing political styles of neighborhoods in terms of their effect on resource allocation in the schools:

- -the community with groups manned by professional organizers
- -the unorganized community where there is need but a political thrust is lacking
- -the community of established middle-class parents, concerned about the quality of the school but lacking concensus on what to do
- -the community of interested parents

In these case-study descriptions, the unorganized community was allocated the fewest resources. There is the suggestion that a lack of community interest and petition leads the school principal to assume a passive role in which he does not represent the community's needs.

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[8] Summerfield, Harry L. The Neighborhood-based Politics of Education. Columbus, Ohio: Charles E. Merrill Pub. Co. 1971. pp. 83-87

Programs Aimed at Reform

Saxe[9] maintains that finding an appropriate balance in school-community relations requires linking mechanisms that relate schools to their communities. These are based on the goals of the school and the principles of communication. While many of them can be described already, there are several efforts underway to discover more appropriate methods for involving citizens in educational institutions.

The Institute for Responsive Education, for example, is attempting to work out alternate forms of citizen participation. Saxe reports that according to its director, Don Davies:

> ...the aim should not be unilateral, absolute power for citizens, but rather a more equitable sharing of power among the professionals, the elected or appointed central school board, and the consumer (parents, citizens, and students). Increased power for the citizens in the governance of the schools will help to create more effective, responsive educational institutions.

The Six Year Program of the Institute is:

-to identify and assess alternative models for effective citizen participation in educational decision making; to increase citizen interest and voluntary activity in the schools

-to assist local groups by providing leadership training, consultant help, information, and materials

-to increase the understanding of and support by citizens, parents, and educators for citizen participation in decision making.

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[9] Saxe, Richard W. School-Community Interaction. Berkeley, Cal.: McCutchan Publ. Corp. 1975. pp. 249-251.

-to encourage better utilization of corporate resources for school reform

-to conduct informational activities--conferences, seminars, publications--and to help create a network of communications and mutual assistance among local citizen groups

Don Davies sees the Institute as "increasing the average citizen's influence over the forces that affect his or her life."

The Kettering Foundation is also reported by Saxe to be sponsoring research to develop new strategies, institutions, and techniques that can enable citizens to be more effective when and as they choose to be involved.

The W. K. Kellogg Foundation,[10] in recent years, has identified the area of volunteerism as one of its priorities for grant support. They focus on efforts to improve the quality of national and local volunteer leadership and the development of new community voluntary programs. One focus has been the management training program for Reading is Fundamental, a national program to motivate children to read which works in close cooperation with schools. Programs such as this that bring community and school together in a positive effort foster improved communication.

L. Harmon Ziegler in the University of Oregon Center for the Advanced Study of Educational Administration (CASEA) directs a program called "The Responsiveness of Public Schools to Their Clientele." Saxe[11] reports that he has found a lag of four or five years between a change of citizen concerns and the response of a school. Based on their studies, the project staff has developed four models of decision-making structures: 1) hierarchical, 2) polyarchical, 3) market-oriented and 4) bargaining. In the first one, decisions and resources are controlled by the leader through a bureaucratic structure. In the second, decisions and resources are controlled by several leaders. The third model is unusual as everything is contracted, even the services of the superintendent. The fourth model is not endorsed by the CASEA staff; however, they feel that negotiation is one way to make needs known.

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[10] W. K. Kellogg Foundation 1975 Annual Report. Battle Creek, Michigan.

[11] Saxe. Op. Cit. p. 251.

Bringing citizens into the schools is only one step toward the development of more relevant programs. The role they play will determine the extent to which they have a "voice" in the education of their children. The literature is just beginning to suggest alternatives for linking the school with the community.

Current Programs and Practices

The greater need for an education today in order to succeed in adult life is one force that has created a greater demand for accountability by the public. Citizens are actively seeking the opportunity to participate in education decision-making. Since Title I programs are gradually gaining a higher level of interest from some PAC groups, the following planning models may be of interest to educators for bringing these parents into the planning activity. They are selected from many described in Modelog.[12]

An interaction game called Advocacy uses information gathered in a community assessment to select and rank goals.

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[12] New Jersey Department of Education. Modelog: A Catelog of Comprehensive Educational Planning Component Models. Trenton, NJ. 1975.

The Atlanta Assessment Project describes the involvement of educators and community members in ranking pre-established goals in terms of predictions of future conditions. This model is a case-study describing activities related to a Title III project.

The Community-Perceived Needs Assessment Module program is a set of six training modules intended to give school administrators skills in identifying community opinions. Manuals for this program were prepared by Research for Better Schools, Inc.

CSE/Elementary School Evaluation Kit: Needs Assessment was designed for faculty, parents, board members and community members to gather information about student needs. Options exist in choosing participants, in using mailed questionnaires or working with groups, and in deciding on critical areas.

Several other models for setting goals and establishing priorities are described. The Right-to-Read process may also be considered as a viable alternative for building a program through a planning process. The Modelog also includes many alternatives for the preparation of objectives, assessment, program selection and evaluation.

The above models all focus on ways that parents can bring input to the educational system. There is another, equally important relationship stressed in the literature and found in practice in many school systems now. It is found in what has come to be called "parenting" sessions in many school systems. These sessions are designed to help parents understand the educational process, the school program, relevant understandings from child development, psychology of learning, and health and safety. These are often established as sessions for parents of preschoolers but are also needed at other stages of the educational program to help parents use home experiences to build concepts and motivation for learning, and extend school learning into home and community life.

Sloan[13] reported a survey that revealed one parent group's top concerns, which were:

1. What is expected of the average child's reading development?
2. How can parents supplement teachers' efforts?
3. What factors prevent a child from learning to read at the peak of his ability?

Sloan suggested that a series of meetings over a period of time be devoted to all aspects of the reading program, sometimes having parents participate as students in minilessons.

Other suggestions included:

1. Study groups arranged around a special topic such as "the non-motivated reader
2. Training sessions for volunteers and aides
3. Workshops on how to read a book to a child, how to develop oral language, how to develop small muscle skills, how to improve visual and auditory discrimination, and how to do these things in a pleasurable atmosphere
4. How to promote story hours, etc. at the public library
5. Rap sessions for parents and professionals in the community

Sloan also suggests ways to enlist parental involvement in the schools:

1. Sponsor parent/staff social events
2. Run a Help-Wanted section in the school newsletter when there are jobs that need doing
3. Maintain a list of community resource people who have special knowledge or skill

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[13] Sloan, Margaret. "Increasing Parent-Teacher Interaction," Reading Interaction. Newark, Delaware: International Reading Association, 1976. pp. 58-63.

4. Have an Author's Day for a nearby author or have a "book talk"
5. Train parents to help in the library or in special projects
6. Create a book corner where parents can read to children
7. Provide booklets of games and activities parents can use with their children
8. Seek parent volunteers to make games and puppets
9. Run a book fair and use proceeds to buy books for those who have none
10. Have a special interest day (music, art, drama) to bring the community together
11. List recommended books, records, games, etc. as gift suggestions
12. Enlist parental help in vision screening and other forms of testing
13. Prepare cards and devices for the media center
14. Have more experienced parents serve as resource persons for young parents

In broader generalities, Gordon and Breivogel[14] suggest that the school can help parents learn more effective ways of working with their children at home by:

1. showing them procedures and activities they had not thought about
2. supporting what they are doing that is soundly based in child development
3. encouraging them to use and to expand upon what they know
4. encouraging them to share with other parents what has worked well

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[14] Gordon, Ira J. and William F. Breivogel. Building Effective Home-School Relationships. Boston: Allyn and Bacon, Inc. 1976.

Artley[15] and Breiling[16] also suggest giving parents information on the school program and supplemental activities they can use in the home. There is general consensus in the literature that most parents learn to become better parents by finding out what are considered priorities at school, e.g., listening to a child, helping a child to become independent, keeping reading situations free from anxiety, rewarding small signs of progress, etc. Parents share the teaching task when they are involved.

Effects on Achievement of Good Parenting

Gordon and Breivogel[17] report on the effects of certain parent styles on child development. In the area of home management, important elements are space to wander, feel and touch, help with game playing, the light touch. Della-Piana and Martin[18] studied maternal behavior toward daughters and found that mothers of over-achievers showed a significant difference in the positive effect and amount of warmth they displayed toward their daughters.

In summarizing this section, there seems to be evidence that schools are better when they are responsive to community needs and use community resources. Education is a public responsibility, not the prerogrative of educators alone. Therefore, it seems reasonable that the public should be involved. In fact, educators have initiated some activities and are currently exploring more ways to do that. A gathering weight of evidence points to increases in achievement when parents are involved, seeming to justify the move toward increased involvement and communication.

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[15] Artley, A. Sterl. "Good Teachers of Reading--Who Are They?" The Reading Teacher, 29:1:1975. pp. 26-30.

[16] Breiling, Annette, "Using Parents as Teaching Partners," The Reading Teacher, 30:2:1976. pp. 187-190

[17] Gordon, Ira J. and William F. Breivogel, Building Effective Home-School School Relationships. Boston: Allyn and Bacon, Inc., 1976.

Several studies are in process to determine alternatives for involving the public. A goodly number of planning procedures that involve the public are already available and catalogued. National, regional and state regulations are pressing for opening the schools to admit parents, not only in Title I projects but those with other funding sources, too.

Long ago, John Dewey wrote of the necessity of an open society where the public can exert influence on those in authority. His thoughts are applicable today to Title I as in other areas of the school enterprise. He said:[18]

> No government by experts in which the masses do not have the chance to inform the experts as to their needs can be anything but an oligarchy managed in the interests of the few. And the enlightenment must proceed in ways which force the administrative specialists to take account of the needs. The world has suffered more from leaders and authorities than from the masses.
>
> The essential need, in other words, is the improvement of the methods and conditions of debate, discussion and persuasion. That is the problem of the public.

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[18] Summerfield. Op. cit. p. 2.

STAFFING AND PARTICIPATION

STAFFING AND PARTICIPATION

The 1975 assessment of reading activities funded under the federal program of aid for educationally deprived children revealed a variety of staffing patterns for Title I programs: teachers alone, aides alone or teachers and aides. Also, programs were found to be conducted in the classroom, in separate reading rooms or a combination of these organizational patterns. Most LEAs indicated a need for more funds to hire additional personnel; however, the reviewers judged that services could have been greatly improved without more funds if (1)services had been concentrated on educationally deprived children and (2)inservice training had been strengthened.

Many school systems were increasing the teacher-pupil ratio in their programs by including students who were non-Title I children, thereby further depriving the educationally deprived children of maximum services. To those school systems where inservice programs were found inadequate several recommendations were made which can be found later in this section. Both recommendations -- teacher-pupil ratio and teacher training -- point out the importance of the teacher in learning. As indicated in another section of this paper, many research studies have shown the teacher to be the most important instructional factor in learning. Methods and materials have had much less impact.

The Teacher Factor

Some studies have attempted to measure the teacher factor in student performance. The Eight-Year Study[1] (1933-1939) under the auspices of the

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[1] Whalen, N. E. and Robert Travers. "Analysis and Investigation of Teaching Methods," Handbook of Research on Teaching. AERA, 1963.

Progressive Education Association showed that the thirty schools which, under an agreement with more than 300 colleges, had been freed from meeting the unit or examination requirement for college admission in order to conduct more experimental programs, produced students who were more successful in college by every measure taken. Lewin, Lippitt and White[2] studied the behavior of students under authoritarian, democratic and laissez-faire leadership and found a significant difference in output. Under authoritarian leadership, they worked only when watched and many exhibited aggressive behavior. Work was most consistent under the democratic leadership, even when not watched. Under laissez-faire leadership, little was accomplished. These are just two of the studies that show the differences in student behavior related to the way the teacher structures and controls the instructional program.

Many studies of the effect of teacher attitudes[3] have been reported. By far the most popular instrument used for this purpose was the Minnesota Teacher Attitude Inventory. Results indicate that teacher attitudes varied on several dimensions: guidance personnel had the highest mean scores and administrators the lowest, female teachers higher than male, elementary teachers higher than secondary, teachers with over 15 years experience high scores and teachers with 2-5 years experience low scores. (Some groups were small.)

High scoring teachers have been shown to be less likely to fail students and more likely to be liked by students. Also, it has been found that teachers scoring high on the MTAI will probably be better liked by pupils who have strong affective values concerning teachers. If pupils have strong cognitive values, the teacher's MTAI score will make less difference. This finding should be of significance in the selection of Title I teachers since many of these pupils lack a cognitive orientation.

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[2] Lewin, K., R. Lippitt and R. K. White. "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates'," J. S. P. 1939: 10: 271-299.

[3] Getzels, J. W. and P. W. Jackson. "The Teacher's Personality and Characteristics," Handbook of Research on Teaching, AERA, 1963.

Several studies have concluded that teacher education and experience make a difference in pupil performance. For example, several years ago, Mollenkopf and Melville[4] studied aptitude and achievement among 9000 ninth graders in 100 schools and 8,357 twelfth graders in 106 schools to determine the effects of school resources. Their data showed that achievement is highest when sufficient money was available to hire non-teaching specialists, establish good libraries, and maintain a relatively low teacher-pupil ratio.

In a similar study, Goodman[5] found that the percentage of teachers in a district with over five years of training made a difference. Per pupil expenditures were high in high achieving districts in this study -- an association that is not always found. It was noted, however, that high expenditures for teachers with an above average (for the study) number of years of experience and training may have supported the relationship between expenditures and achievement.

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[4] Mollenkopf, W. G. and D. S. Melville. "A Study of Secondary School Characteristics as Related to Test Scores." Research Bulletin, 56-6, ETS, 1956.

[5] Goodman, S. "The Assessment of School Quality," Albany, N. Y.: State Department of Education, 1959.

In a study conducted by Payne, Krathwohl and Gordon,[6] it was found that the logical arrangement of instructional programs was superior to a scrambled arrangement of verbal information in producing achievement gains. This study seems to refute the belief that students learn skills in a random order. A logical sequence requires careful planning on the part of the teacher. Teacher education and experience may be a factor in this type of instruction.

Suggestions for Teachers

Descriptions of articles and programs in the ERIC files providing a number of alternative suggestions for selecting and/or using staff are offered. Anderson[7] recommends staff that restore the child's security, discuss the child's area of confidence in reading and advance from the area of confidence by a series of success steps.

Cutts[8] recommends that teachers regard diagnostic tests as tentative and that they be adequately trained to develop a remedial program that adjusts to student's instructional needs.

Lyons and Oxman[9] describe a program that used 12 educational assistants at junior high school level to provide intensive individualized instruction. They recommend this type of staffing.

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[6] Payne, D. A., D. R. Krathwohl and J. Gordon. "The Effect of Sequence on Programmed Instruction." American Educational Research Journal, 4:67:125-132.

[7] Anderson, Lorena, et al. Suggestions for a Corrective and Remedial Reading Program. Richmond, VA: Department of Education, 1969.

[8] Cutts, Warren. A Model Program for Remedial Reading. ED002603.

[9] Lyons, Linda and Wendy Oxman. State Urban Education Programs. Community School District 22, Brooklyn, NY, 1974.

The Cleveland[10] program used more highly specialized staff. In addition to clinic staff, nine reading consultants provided follow-up services when students returned to their classes with excellent results. The most severely disabled gained 16 1/2 grade equivalent units and moderate-term pupils averaged a gain of six G.E. units.

Project Read[11] was designed to stimulate interest and the reading ability of selected pupils in P. S. 140. The supportive training for inexperienced and new teachers was provided by 10 master teachers. Each supervised 8-10 new teachers.

While many of the studies reported would not meet standards for good research, they do indicate that a variety of staffing patterns can be used to meet local needs. Most of the programs reported had highly specific inservice programs to support the use of staff.

The Use of Paraprofessionals and Volunteers

Schools are becoming quite used to the idea of using non-certified persons to assist in the educational program. Paraprofessionals and volunteers can do a variety of things to save the teachers valuable teaching time and provide more contact time to individualize students' programs.

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[10] Logan, Juanita. Diagnostic Reading Clinic, Title I Evaluation, 1972-1973. Cleveland Public Schools. ED094094 UD014474.

[11] Community School District #1. Brooklyn, NY, 1973. ED094057 UD014406

Parent Volunteers. Miller and Wilmshurst[12] recommend parent volunteers because:

-A parent is an experienced teacher already.

-You (the teacher) and the children need the help.

-Volunteering helps the volunteer's child more than any of the other children.

-A volunteer can act in many different capacities.

-You (the teacher) will try to match the volunteer's interests and abilities with the task to be done.

There are many community sources of volunteers. As well as parents, the following groups are suggested: other family members, retired persons, high school students, nearby residents, women's and men's clubs, cultural groups and youth groups. It is suggested that all sources of volunteers be listed in the file.

The text from which these ideas have been extracted also provides a sample questionnaire for gaining information from parents about their experiences, interests and availability. It is as follows:

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[12] Miller, Bette and Ann Wilmshurst. Parents and Volunteers in the Classroom. San Francisco, CA: R and E Research Associates, 1975.

PARENT QUESTIONNAIRE

NAME: ____________________

ADDRESS: ____________________ **PHONE NO.** ____________________

MY CHILD'S NAME: ____________________

MY OTHER CHILDREN'S NAMES AND AGES ARE: ____________________

MY OCCUPATION IS: ____________________

MY INTERESTS OR HOBBIES ARE: ____________________

I HAVE TRAVELED TO: ____________________

The best time for me to visit my child's classroom would be:

Day of the Week: ____________________

Time: ____________________

This year I hope my child will:

The following suggestions are made for ways parents can help in the classroom:

- -In a study of family or growth, a mother might bring a baby to school and wash, dress and/or feed it to invite discussion.
- -Share information about his/her job.
- -Bring a pet to share.
- -Help with room decoration.
- -Check papers for teacher.
- -Keep records.
- -Bring articles for science table.
- -Share items needed for class project.
- -Make name tags for children and volunteers.
- -Make teaching aids.
- -Clean art supplies.
- -Repair toys and games.
- -Take charge of bulletin board.
- -Keep cupboard in order.
- -Wash paint aprons.
- -Keep small garden in order.
- -Keep books in order.
- -Prepare newsletter.

-Babysit with children of volunteers.
-Be telephone chairman.
-Make and run dittoes.
-Make housekeeping corner attractive.
-Chaperone field trips.
-Coordinate community resources.
-Be room hostess.
-Be coffee chairman for parent center.
-Arrange a bulletin board for parents.
-Be book club chairman.

Cross-age tutoring. Cross-age tutoring is a special form of volunteerism that has often produced good results. Two such studies are reported here.

In a paper presented by Herbert Rosner,[13] some characteristics of a successful cross-grade tutoring program were described: pre-planning with school personnel; emphasis on attitudes; orientation sessions with tutors; varied multisensory approaches coupled with multimedia learning centers; record-keeping by tutors; on-going supervision; analysis, direction and evaluation by reading teacher in charge; and community participation. Fifth and sixth grade remedial reading students were paired with second and third graders for a 10-week tutorial cycle. All averaged two years or more below grade level at the start. At the end of 10 weeks, tutees made an average gain of four months or more. Fifth and sixth graders who tutored mornings and received remediation in the afternoon averaged a one year or more gain.

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[13] Rosner, Herbert." Facets of a Cross-Grade Tutorial Program." Paper presented at IRA Conference in Ahaheim, Cal., 1970.

A study,[14] presented at the AERA conference in Chicago, 1974, discussed the effects of using teacher aides and student tutors in remediating second and third graders with reading problems. Aides managed the tutoring program. They trained the fifth and sixth-grade tutors. The tutored group outperformed the control group in acquiring basic skills, and of the 54 students who were tutored, only one failed to make a significant improvement in reading skills. However, the study was of short duration.

Inservice Education

Title I regulations and guidelines require that LEAs provide Title I teachers, aides and other staff with adequate, inservice training for their positions. In their reviews of Title I projects, evaluators have found that programs for students could have been strengthened in several LEAs if adequate training had been provided to project staff on matters such as: 1) the intent and requirements of the Title I program, 2) the effective use of teacher aides, 3) remedial reading techniques, and 4) special education techniques and approaches.

It has been found that quality inservice training leads to improved instruction for educationally deprived children.

Several reports indicate the value of inservice education. A paper by Mauser[15] supported the idea that paraprofessionals could be of better assistance to teachers, increase student motivation and improve public relations if they were properly trained. An example given was on the use of the Peabody Language Development Kit. Through proper training, more positive results were achieved. Also, more different types of persons could be used with proper training: war veterans, senior citizens, deliquents, educable mentally retarded adolescents, etc.

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[14] Plumb, G. "An Empirical Investigation of the Use of Paraprofessionals and Student Tutors in Remediating Reading Deficient Primary Grade Students." ED 090524 CS001085.

[15] Mauser, A.J. "Why Paraprofessionals in Reading." a paper presented at the IRA Convention in Detroit, Michigan, 1972.

Murray[16] found that, through inservice, parents can be helped to teach their learning disabled children. After 12 one-hour sessions, students had made significant gains. Treatment included diagnoses, personality theory, learning theory, and reading methodology.

Blanchet[17] took another approach to training parents through the development of a guide. Suggestions for parents include: accepting the child and his problem, the ridding of both parent and child anxieties, a careful assessment of motor control, cautions against requiring a phonic approach (not necessary and often too difficult and stressful for these children), and the importance of developing a sense of worth in the child. Sample lessons and suggested activities and materials are given.

Following are some descriptions of Title I projects that have attracted recognition because of the positive results they have achieved.

USOE's Division of Compensatory Education provided these Case Studies[18] of successful projects to serve as idea stimulators. Many of these emphasize staff development. Selected summaries follow:

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[16] Murray, B.B. Individualized Amelioration of Learning Disability Through Parent-Helper-Pupil Involvement. Final Report, Proj.-1-D-032, 1972.

[17] ERIC Files.

[18] Education U.S.A. Special Report. Compensatory Education: What Works to Help Disadvantaged Pupils. (NSPRA) 1973.

The Pyramids Reading Program in Minneapolis emphasizes four activities:

- Training for teachers and teacher aides
- An instructional materials center for development of supplementary classroom materials
- Actual classroom instruction
- Summer school

In this program, the inservice training course is offered for all teachers, aides and other personnel. The program concentrates on:

- Demonstration of effective instructional techniques for teaching disadvantaged children to read
- Laboratory experiences in diagnosing reading disabilities, analyzing the reading level of the whole class and grouping students within the class.
- Classroom methods and materials for treating specific reading difficulties and development of supplementary materials by small groups of teachers
- Classroom methods for helping children with severe reading disaabilities

Students at the University of Minnesota are given an opportunity to do an internship in this program providing more staff; and flexible staffing patterns, such as team teaching and small group instruction, are encouraged.

The Bilingual Project in Albuguergue, New Mexico was a good example of teachers' efforts to individualize the program for their particular students. The program aimed at helping children achieve academic success, improve their self-image, retain and develop their native language and culture, and gain fluency in a second language and understanding and appreciation of a second culture. Teachers worked in committees with the aid of Title VII personnel to develop aids, adapt stories and songs, write curriculum guides with sample lesson plans, etc., to adjust the program to the aims of the project. It seems that the teacher factor here was highly significant.

The K-4 Continuous Progress Program in Williamsburg County, S.C. viewed teacher training as an important component in changing its emphasis from traditional, graded classrooms to skills development centers supervised by teams of teachers and aides.

One of the major aims of Project Conquest in East St. Louis, Ill. was to train regular classroom teachers in remedial reading techniques. This emphasis enabled the classroom teacher to coordinate with the work of the Title I teacher to meet the other two project aims: to raise students' level of achievement and to improve their self-concept.

The Diagnostic Reading Clinic Project in Cleveland, Ohio recognized the importance of the teacher factor in coordinating classroom and clinic learning by providing consultation services to classroom teachers of referred pupils. The program developed for each child had the following characteristics:

-highly individualized remedial treatment

-highly organized instructional plan

-concern for the child's need to feel successful

-provision for articulation and follow-up with the child's regular classroom teacher so that reading progress can be maintained and strengthened

The inservice needs of teachers in Project MARS in Leominster, Massachusetts were met by having teachers participate in inservice team meetings and in a summer reading institute. Periodic follow-up sessions were required so that teachers could keep abreast of new developments in instruction.

In summarizing the available information about the exemplary programs identified by the American Institute of Research, it was evident that inservice training was an important function and that many of the programs provided inservice training for regular classroom teachers so they could coordinate their work with the work done in special programs and classes. As in the research findings of programs conducted in regular classrooms, the teacher is a key factor in programs for disadvantaged pupils also -- perhaps even moreso.

Selection of Participants

Since the selection of participants is one factor to weigh heavily in the evaluation of Title I programs by outside reviewers, Chapter 4 of the Report to the Congress[19] of the 1975 assessment is reproduced here as a guide for developing standards to be used at the local level. This chapter, entitled "Improvements Needed in Selecting Program Participants," will be found in Appendix C.

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[19] U.S.O.E. Assessment of Reading Activities Funded Under the Federal Program of Aid for Educationally Deprived Children. Comptroller General's Report to the Congress. Washington, D.C. 1975.

PROGRAM

By law, the Title I reading program must supplement, not supplant the regular classroom program. A supplement is something added to make the original thing more complete. By this definition, the Title I program must be thought of as an integral component of the school program -- an addition that rounds out and makes more complete the program planned for each student in the regular classroom.

The point of view that Title I is an integral aspect of the school program will prevail in this paper. An attempt will be made to show how research is most conclusive in support of supplementary programs for the disadvantaged -- programs that provide the needed time for learning.

Goals

The terminal goal of the reading program is that 99 percent (excepting the one percent mentally defective) of the students who graduate or leave school will possess the literacy skills required for an effective and productive life. Since the reading program is a long term effort, there is a need for interim goals and objectives that apply at each stage of development to serve as standards by which the program can be measured at regular intervals. According to the New England Consortium for the Right to Read, the following goal areas (now incorporated in the Federal regulations for Right to Read programs) and objectives serve this purpose:[1]

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[1] New England Consortium for the Right to Read. Focus on Excellence, Kingston, RI: URI, 1973.

A. Community and School Climate

1. The whole school atmosphere reflects commitment to the importance and enjoyment of reading.
2. The entire community views reading as an important activity in each individual's life.
3. The entire community actively contributes to and supports the school reading program.
4. The classroom climate reflects respect for and support, by both teacher and pupils, of each individual child's progress in reading.

B. Organizing and Managing a Reading Program

1. There is articulation and coordination of the reading program throughout all the administrative units of the school system.
2. A continuous progress organization of the reading program is in operation.
3. The organizational patterns within classrooms and in the school as a whole meet the needs of all segments of the school population.
4. The language arts program is integrated, each component supporting all other components.
5. The reading program recognizes and accommodates the needs of sub-populations.
6. All content area teachers are teaching those skills necessary to the effective reading of their own instructional materials.
7. The evaluation component of the reading program provides the data necessary for describing the current status of achievement in reading and measuring progress.
8. The reporting system is designed to interpret a child's reading progress to his parents.
9. The school system has a program of education for parents (or other adults responsible for children) with special emphasis on parents of preschoolers.
10. The school system provides reading instruction for adults.

C. Staffing a Reading Program

1. The board of education has designated someone within the school system who has the central office support, responsibility, and time for the development and maintenance of a quality reading program.
2. The board of education actively seeks candidates with preparation in the teaching of reading when filling new positions.
3. The local board of education has established an incentive program for teacher inservice education in reading.
4. There is a continuous program of staff development.
5. The school system has a cadre of trained volunteer reading helpers.

D. Selecting and Utilizing Materials

1. The school media center meets the ALA/NEA standards.
2. All textbooks and other materials are appropriate to the instructional level of the students using them.
3. Materials in both classrooms and media centers accommodate the varying learning styles of the pupil population.
4. The materials in both classrooms and media centers are selected to accommodate the wide range of reading interests of the pupil population.
5. The school system maintains a library of carefully selected and frequently updated professional media.

E. Fostering Reading Interests

1. The school reading program recognizes the importance of personal independent reading and promotes this type of reading in a variety of ways.
2. The public library promotes reading among all segments of the population.

Areas A and C are covered in other sections of this report. Areas B, D and E are incorporated in the sections below. Taken together, these five goal areas and the criteria or standards subsumed in each area are the hallmarks by which an excellent reading program may be recognized.

Inherent in the philosophy embodied in these standards is the belief that all components of the reading program (Title I program, remedial/corrective programs, summer school programs, content area reading programs, etc., as well as classroom reading programs) should be interrelated so that students may move from one to the other without experiencing a change in philosophy or methodology. The great divisiveness of effort in our schools today often contradicts the laws of learning, inhibiting growth. The recent movement toward "integrated language arts" is one example of an effort to counteract in the classroom, at least, the unproductive separation of language skills that has been allowed to occur over a long period of time. There is also a divisiveness in the way most classroom and remedial/corrective programs (including Title I programs) are operated. The potential for improved student achievement is great, once the parts of the programs are more coordinated.

Components of the Reading Program

This section is designed to provide a framework for the discussion that follows. The individual strands and components within the strands of an ideal program will be referred to in subsequent sections. The reader will better understand their relationship to the whole program if this section is used as an overview of the total program.

A total reading program[2] is made up of three strands: 1) basic skills, 2) work-study skills and 3) the development of habits, attitudes and tastes related to independent reading. The basic skills, often referred to as the "fundamentals of reading," are comprised of vocabulary development, word recognition skills, comprehension skills and reading rate. Work-study skills, commonly called "reading in the content areas," include the locational and organizational skills required for the use of textbooks and reference sources. In addition, dictionary skills and the teaching of technical vocabulary are usually categorized in this area.

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[2] Cooper, J. Louis. The Total Reading Program. Unpublished monograph, 1959.

The third strand, "children's/young adult literature," involves the teaching of appropriate literary genre and stimulating the bringing together of children or young adults with books to foster reading interests,[3] habits and tastes.

The following chart shows these components in a visual array:

A TOTAL READING PROGRAM

Strand I	Strand II	Strand III
Fundamentals of Reading	Reading in the Content Areas	Children's/Young Adult Literature
(Basic Skills)	(Work-study Skills)	(Independent Reading)
Vocabulary	Dictionary Usage	Literary Genre
Word Recognition	Technical Vocabulary	Fostering Reading Interests
Comprehension	Locational Skills	Building Reading Habits Attitudes Tastes
Rate	Organizational Skills: Textbook Reading	

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[3] New England Consortium for the Right to Read. Fostering Reading Interests. A position paper. Kingston, R.I.: URI, 1976.

Normally, a child's reading experiences begin with Strand III when parents and others begin reading aloud and storytelling to foster interest in books and the world of children's literature. This strand continues to be an important aspect of the reading program all through school. At the secondary level, it is incorporated in the study of literature in English classes as one of the objectives, as a rule. It is through this strand that students not only practice and make meaningful the reading skills that are learned, but also make contact with "the human experience." As Leland Jacobs has often said, "The reader can try on someone else's shoes for awhile through vicarious experiences with books." It is this strand to which Senator Thomas F. Eagleton (D-Mo.) was referring when he discussed his views on the new legislation for reading -- The National Reading Improvement Act. He said:

> It also seemed quite evident that in spite of the many poor readers, as a whole, youngsters could read to a far greater extent than they did read. Testimony at the hearings emphasized that not enough students were reading for pleasure. To me, this indicated a need to provide motivation for reading as well as help in learning to read.

In response to a question regarding the programmatic components that would be involved, he went on to say:

> I felt that involving parents in homelike situations with children and books would help to make reading seem a more natural part of life. The Reading is FUNdamental program, stimulating book ownership, seemed right on target, too. To encourage wider reading, I believe it is important to begin at an early age to develop interest in reading. More emphasis should be placed on the young child.[4]

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[4] McGuire, M.L., ed. "Interview with Senator Eagleton," The Consortium Courier. Newsletter of the New England Consortium for the Right to Read, September, 1976.

When children come to school, emphasis on Strand III continues through "read to" and storytelling sessions and the reading of picture books. In addition, readiness for Strand I is checked and instruction proceeds based on the results. Strand II skills are not introduced until students begin to read content area books, with the exception of the use of the dictionary, often taught along with word-recognition skills.

In the primary grades, the major emphasis in teaching is placed on Strands I and III, with content area reading skills taught only to the extent that these books are used. Picture dictionaries are often introduced. Providing progress in basic skills is average or better, the emphasis changes at about level three or four to Strand II, reading in the content areas, along with maintenance of basic skills and their application in more difficult contexts for more sophisticated development. The content area skills continue to need instruction and reinforcement throughout the high school years -- with equal attention given to stimulating independent reading and help, as necessary, with basic skills.

This discussion of the components of a total reading program may serve as a backdrop against which many programs and practices may be held for comparison. Before launching into a discussion of approaches to reading, an excerpt from the Corder study will be summarized. The concepts and principles discussed are intended to provide basic understandings about the pool of knowledge that has been tapped on the development of various reading programs in use in the schools today.

The Knowledge Base for Reading

The Reginald Corder study[5] involved a critical review of the literature in three areas, one of which deals with methods, approaches, procedures and equipment used for reading instruction. It was contracted to Educational Testing Services in Berkeley as part of the Targeted Research Program in Reading. (Gephart)

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[5] Corder, Reginald. The Information Base for Reading. Berkley, Cal.: Educational Testing Service, 1971.

In Chapter IV, Maxwell and Temp, reporting on their survey of the literature on methods and materials in reading, highlight the work of Albee[6] in discussing the applications of psychology to the body of knowledge unique to education. The five major concepts reported to be pertinent are:

1. Individual differences -- applicable to both teachers and students.
2. Maturation -- including the concepts of a) readiness and b) the critical period for learning. There is the implication that working with age groups younger than six may take better advantage of critical periods for learning.
3. Motivational structure -- the hierarchical pattern of human motivational structure is crucial. From lowest to highest levels, the hierarchy includes the following stages (Here Albee cites Maslow's work):

   The need for food, warmth, etc., the need for safety, needs for love, affection and self esteem, and finally a need for self-actualization. Albee states[7] "A great deal of nonsense has been written about various techniques for accelerating or enriching the learning experiences of deprived children, without taking into account the basic psychological fact that the human motivational system is hierarchical and that higher order motives cannot operate in the presence of severe frustration at the more basic level.
4. Learning Theory -- Particularly, the following four principles are applicable:

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[6] Albee, George W. "Psychology and the Body of Knowledge Unique to Education," Pi Lambda Theta, The Body of Knowledge Unique to the Profession of Education. Washington, D.C.: PLT, 1966. pp. 27-44.

[7] Albee. Op. cit. p. 39.

a. Learning to learn -- following repeated opportunities to learn, individuals will exhibit improved attention, readiness, sophistication and alertness in learning.

b. Transfer of training -- teaching certain subjects to "strengthen the mind" in inappropriate and futile. But, there are ways in which practice of one skill may facilitate the learning of a similar skill.

c, Reward and punishment -- positive reinforcement is essential for the acquisition of learning and punishment is ineffective in eliminating unwanted elements of behavior.

d. Immediate feedback -- giving individuals a measure of control of the situation in ways such that chances of failing are minimized enhances learning.

5. Socialization Models -- These include models such as Riesman's for understanding people in different societies. Riesman suggests that people in evolving societies change from being tradition-directed to being inner-directed, to being other-directed. Maxwell and Temp[8] gauge that: "Models such as this are important because educators in our society are confronted with the frustrating and baffling problems of educating pupils who remain in the system not because of their interest and ability to learn but because of societal pressures."

They conclude:

> Education draws its knowledge base from the social sciences (psychology anthropology, sociology, lingiustics, etc.).[9] Since the basic concepts generated by the social sciences at the present time are in no way comparable to the laws of the Physical sciences, they do not provide a clear blue-print for educators to follow. Furthermore,even considering the relative vagueness of the general concepts, those that have been translated into educational practice have failed to utilize fully the information base or have been sloppy and inexact in their translation.[10]

There is a relationship between the basic pool of knowledge and the methods and materials of instruction described in the next section. Inferences will be drawn about the basic principles underlying the various approaches and methods.

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[8] Maxwell, Martha and George Temp. "Survey of the Literature on Methods and Materials in Reading," The Information Base for Reading. Berkley, Calif.: Educational Testing Service. 1971 pp. 61-106.

[9] Author's insert.

[10] Maxwell and Temp. Op. cit, P, 68.

Approaches to Reading Instruction

Methods and materials of reading instruction differ most at the early stages of reading and are difficult to distinguish by their appearance and skills programs by the middle grades. The basic approaches to reading are commonly classified as:

1. Meaning emphasis -- in which comprehension of what is read is stressed from the beginning. Students are usually taught several sight words first. When phonics instruction begins, these words are used as examples of the sounds letters have in words.

2. Code emphasis -- which may be approached as Analytic phonics as described above noting the sounds letters have in words, substituting letters to make different words, etc., or synthetic phonics -- learning the sounds of letters separately and combining or synthesizing these sounds to make words. Many of the linguistic programs also have a code emphasis as they initiate instruction by singling out and teaching the phoneme-grapheme (sound/letter) correspondences in language.

3. Linguistics -- the study of the units, nature and structure of language. As indicated above, many linguistic programs present the code first and delay the meaning emphasis until a more advanced level is reached (end of first grade or second grade).

4. Modified alphabet -- such as the initial teaching alphabet (i.t.a.) approach. An alphabet is used in which each symbol has only one sound until students can read and write the code, then transfer is made to traditional orthography (t.o.).

5. Language arts -- in which instruction in listening, speaking, reading and writing is correlated for better understanding, reinforcement and use of time. For example, instruction is listening for the main idea is accompanied by instruction in reading for the main idea as the reasoning process is the same.

6. Language experience -- in which students who have participated in a common experience discuss that experience and then dictate a short story about it (a few sentences) which the teacher writes down. The story then becomes the material used for teaching reading (including the mastery of a basic sight vocabulary).

7. Trade books -- the use of a large number of books, acceptable examples of children's literature, at appropriate levels of difficulty in readability and concept level for the range of students in the class.

8. Eclectic -- in which a combination of approaches and/or methods is used.

There are particular methodologies by which these approaches are implemented in the classroom. These are often referred to as:

1. Basal reader method -- usually used with groups that are fairly homogeneous in achievement level -- in which any of the above approaches (usually a combination of two or more) may be used in a teacher-directed reading activity spelled out in the accompanying manual.

2. Individualized -- in which students read independently (often in trade books) and are instructed by the teacher individually in relation to the book being read and in small groups for skill development. Any method by which students are allowed to progress independently of the group is usually termed "individualized."

3. Programmed -- in which there is a sequential presentation of bits of information in small steps or frames, each requiring a response on the part of the student. Answers are then revealed for immediate feedback. Students progress at their own rate, the teacher's role is to monitor progress and administer progress tests at specified intervals. Little instruction is required for average students because the information presented is broken into such small increments that students who pay attention can usually respond to the material in each succeeding frame. For reading programs linguistically oriented material stressing phoneme grapheme correspondences is usually used.

Reading Approaches and the Knowledge Base

All approaches to reading instruction can be categorized basically as having a meaning emphasis, a code emphasis or a combination of the two. In practice it is thought that a high percentage of teachers actually use an eclectic approach. For the purpose of bringing this summary into a meaningful focus, these three headings will be used as organizers.

Meaning approach. From the time of Ebbinghaus' early experiments in 1885 to the present, researchers have documented the fact that learning and retention are vastly improved when information is meaningful. "Meaningful learning as a process presupposes ... both that the learner employs a meaningful learning set and that the material he learns is potentially meaningful to him."

Reading tests, on the average, emphasize meaning. It is only in the early primary grades that reading tests measure mostly word recognition. By middle grades, all tests emphasize meaning. Several investigators have tried to determine what factors influence comprehension scores. Samuels[12] found that both elementary school and college students had significantly faster average rates and comprehension scores in paragraphs with words having high associative relationships than in similar paragraphs with words having low-associative relationships. If students could associate meaning with words, comprehension was improved.

Rothkopf and Bloom[13] in two studies, showed that questions embedded periodically within the text resulted in higher comprehension. This method is comparable to the teacher-directed silent reading activity that is part of the basal reader method.

Oaken found that a large portion of a poor reader's problem is in comprehending what he reads is related more to the manner in which he organizes the information he takes in than to decoding problems. Reasoning skills seem to be the predominant problem.

Another factor thought to influence comprehension is teacher questioning. Reasoning is practiced only when the individual is presented with a problem requiring reasoning. Yet, several studies[14] have shown that nearly 70 percent of teacher questions deal with facts and not the ability to reason with the facts.

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[11] Ausubel, David P. The Psychology of Meaningful Verbal Learning. New York: Grunece Stratton, 1963. P. 22.

[12] Samuels, S. Jay. "Modes of Word Recognition, "Theoretical Models and Processesion Reading. Newark, Del.: IRA, 1970. pp. 23-37

[13] Rothkopf, Ernst Z., and Benjamin Bloom, 1970.

[14] Hilda Taba, Frank Guszak and others.

Attention to comprehension is a feature of several of the approaches to teaching reading. One of the premises underlying the use of the initial teaching alphabet is that with letter-sound associations carefully controlled for the beginning reader, more meaningful material can be read. Writing, also, can be more meaningful as children should be able to read and write materials that would be understandable to them when they listen, once the code is mastered.

Research has not borne this out. First graders have been found to score higher on tests of oral word identification and pronunciation of phonically consistent words, on the average. Several studies show that they also write longer sentences but rarely do better than students taught traditional orthography in paragraph meaning tests. Furthermore, any positive effects derived initially tend to disappear in subsequent years.

In 1908, Huey is reported to have described the reading program in the Francis Parker School in Chicago which was essentially the same approach currently recommended by Van Allen, the language experience approach. Advocates of this method emphasize the need for the child to communicate and express himself. This becomes the motivation for reading and writing. Vocabulary is developed by bringing new words into the discussion and using these words in stories. This method is often used in kindergarten and beginning first grade.

Results of studies using the language - experience method have been difficult to summarize because different tests were used to measure their effectiveness. Several reports of positive attitudinal changes have been recorded but most gains seem to disappear over time, as in other studies of beginning programs.

Code emphasis. Intensive phonics programs and most linguistic programs belong to the code - emphasis approach. Comparing synthetic with analytic phonics, Maxwell and Temp[5] argue that each approach focuses on a narrow view of what the reading process is and emphasizes the nature of the stimulus (letters and words) rather than the process of getting meaning from reading. Both phonic approaches assume that children must be taught to read in a highly structured way, that they are capable of making the large number of discriminations necessary for these approaches at an early age, and that mastery of the decoding process will provide an adequate foundation for comprehension at a later stage. Intensive phonic and sound-symbol linguistic approaches that teach the "code" first ignore the importance of motivation, growth and development, characteristics of the learner and the importance of "meaning" in learning.

Spache[16] reports on the results of many longitudinal studies of phonics programs. Some of these have been continuous since the 1950's when critics forced schools to return to these approaches that had been abandoned in the 1920's. Many studies have recorded the progress of children in the Cardon, Phonovisual, Economy, Words in Color and other phonics programs. In general, this research has indicated certain results fairly consistently:

> 1. Children taught to read by a phonics system make rapid progress in word recognition.
>
> 2. On first grade reading tests, which usually do not measure much more than word recognition, such pupils often score higher on the average than those in basal reader classes.

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15 Maxwell and Temp. Op. cit., P. 104.

16 Spache, George. *Reading in the Elementary School*. Boston: Allyn and Bacon. 1967 pp. 482-489.

> 3. Pupils in phonics systems probably learn to name words more rapidly.
>
> 4. But, these pupils come to believe (as some of their teachers do also) that reading is sounding and naming words.
>
> 5. These pupils tend to analyze too many words and to lack the quick recognition essential to fluent reading. They tend to lack a large sight vocabulary.
>
> 6. As a result, as pupils progress through the grades, their rate of reading tends to be somewhat slower.
>
> 7. Because of the emphasis upon words, comprehension is often poorer than pupils taught by other approaches, in grade levels above the first.

Following his report of the generalizations from research , Spache goes on to explain:

> These negative comments on the use of a phonics approach to beginning reading should not be interpreted to mean that training in phonics is pointless. Phonics skill is an essential tool to unlock the pronunciation and thus, perhaps achieve recognition of unknown words. As we have suggested, . . . phonics certainly should be taught as one of the word attack skills in primary grades. But we strongly question its validity as the basic method of learning to read.

Several of the First Grade studies were continued through second grade to test out the longer range effects of various approaches to reading. These studies involved as many as 1,000 children. In one such study which compared the Lippincott system with the basal reader, a basal plus phonics, and i.t.a., the findings over a two-year period of time led to these conclusions:

> 1. Basal programs may be strengthened by adding a supplementary phonics program.
>
> 2. Intensive phonics programs are effective in promoting word recognition, phonics skills and spelling but these advantages tend to be realized mainly by high IQ pupils who are capable of following these complex systems.
>
> 3. Among low IQ pupils, the basal program compares very favorably with others in its effectiveness.

> 4. The extent of children's reading tends to be distinctly limited in other programs in comparison to the basal, and thus their enjoyment and attitudes toward reading are often weaker.

These findings are consistent with some of the findings of the Rhode Island study which showed:[17]

> 1. The traditional basal reader approach produced significantly higher achievement than an intensive phonics approach.
>
> 2. A supplementary phonics program used with the basal reader approach was related to high achievement.

The available pool of knowledge provides no justification for intensive decoding or code emphasis approaches to reading. Underlying these approaches are several basic assumptions. First, it is assumed that children will learn to read more quickly and easily if the initial stages of reading are simplified by changing the code, controlling the phonic or linguistic elements presented, giving rules, restricting vocabulary to words that contain certain phonic elements or certain linguistic patterns, etc. These assumptions are based on the thesis that it is desirable to get young children through the formalities of decoding written language as quickly as possible. This is a value judgment for which there is no empirical evidence.

There is some evidence that if initial instruction is too simplified and limited, the child will not be prepared for the variety of skills required at the next stage. There is also a weight of evidence indicating that many six-year-olds who are within the normal range do not have the refinement of perceptions at age six to profit from intensive phonics.

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[17] McGuire, Marion L. A Statewide Study of Reading Programs: A Research Report. Rhode Island Department of Education, 1967.

The author would estimate that as many as 35 percent of first graders do not profit from intensive and extensive phonic instruction causing the development of poor self-concept and feelings of frustration. Many of these children lack the vocabulary and concept development that would make reading a meaningful activity. Time would be better spent in more diversified activities that would stimulate the development of language, concepts, reasoning, motivation, and readiness for phonics.

There is some evidence that a sizable percentage of the high school population cannot successfully read any book in the high school. To the extent that this is true in any given community, it should cause educators to give some thought to the manner in which students with poorer readiness skills are introduced to reading. Perhaps less pressure on a meaningless decoding process at the early stages of reading would foster more growth in the long run.

Many children do not have adequate perceptual development for phonics until the age of seven. These are not the perceptually impaired children. Seven is within the normal range for perceptual development. Using a systemwide phonics or linguistic program that is basically an intensive decoding approach in Grade 1 dooms these children to failure.

Eclectic approach. It has been found that most teachers use an eclectic approach.[18] They follow the recommendation of authorities in the field when they do so. No author of a major textbook on reading instruction recommends anything other than an eclectic approach. To the extent that this approach is representative of basal readers, these findings apply: comparative studies show that students who use basal readers (in contrast with more phonics -centered materials) tend to have higher reading comprehension scores. High scores achieved by students in phonics programs are usually limited to word recognition and pronunciation.

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[18] New England Educational Assessment Project. Reading Instruction in New England's Public Schools. Feb. 1969.

Most research on reading in the schools combines so many factors it is hard to single out the results on program emphasis. Studies identified as a result of a search of ERIC files illustrate the comprehensiveness of most designs (eclectic programs):

The St. Louis Reading Improvement Teams Project[19] is a Title I project that serves 10,000 students in Grades 1-8. Instructional strategies emphasize reading comprehension but vary to meet the child's needs. Reading assistants identify underachievers, diagnose students' difficulties and write prescriptions. Developmental reading teachers give instruction. It has been identified by USOE as an "Effective Program."

Another "Effective Reading Program" operates in the Jordan School District in Utah,[20] serving 700-800 students in a special program geared to interests and needs. The program components are word attack, comprehension, work-study skills and oral reading. Every pupil is made to feel important and successful. The remedial teacher works as part of the regular developmental program so there is no "special program" stigma. A wide variety of books is provided at students' independent reading levels and they are allowed class time to read. Parents are encouraged to be involved.

A high school program for underachievers in the Warren City Schools,

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[19] St. Louis Public Schools. ESEA Title I Report. 1974-1975. ED 10.3170-32-CS001959. ERIC.

[20] Jordan School District, Sandy, Utah. 1974. ED 106838 CS001922. ERIC.

Ohio[21] has also been identified as "effective." It is the Integrated Language Experience Approach Using a Research Unit. The unit begins with scenes from "Requiem for a Heavyweight" followed by a visit from an amateur boxer and a sparring exhibition. The students read The Contender, a novel about a high school dropout who aspires to a better life through boxing. The novel and characters are explored through a variety of activities. The students do a research project related to some aspect of the novel--learning how to use the library at the same time.

Significant gains have been made by Hartford's Intensive Reading and Instructional Teams[22] in Grades 3, 4 and 5.

Hough, Caffrey, Lewis and Wilt[23] showed that improvement in listening promotes an increase in reading ability. As a result of Wilt's study, it was concluded that listening is not a natural ability and must be taught.

Featherstone[24] describes a method of English teachers to build reading-thinking-writing skills in a synthesized way to enable disadvantaged students to increase their survival power. This is an example of a language arts approach that is specifically designed for students typical of those in Title I areas.

Roth defines reading; describes a balanced reading program including all the langauge arts--listening, speaking, reading and writing; defines the roles of the classroom teacher, reading teacher, reading consultant and principal; describes a reading breakthrough where children enjoy reading success; provides an extensive checklist of reading behaviors; discusses causes of reading problems and makes recommendations.

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[21] Warren City Schools, Ohio. Integrated Language Experience Approach: A Research Unit. 1974. ED 106833 CSoo1891.

[22] Hartford Public Schools, CT. Intensive Reading and Instructional Teams. 1972-1973. ED080648 UDo13780.

[23] ERIC Files

[24] Featherstone, Jane. Reading as a Thinking Process: Implications for the Culturally Disadvantaged College Student. 1974. ED 090502 CS001053.

The literature on specific programs reveals that many are eclectic in nature. These serve to make adjustment to individual learning levels, learning rates, learning styles and specific difficulties a little easier to handle in the instructional program. Maxwell and Temp[25] conclude:

> Underlying all of the methods is an implicit hope that a panacea will be found. This, too, is an historic characteristic of reading methods in the United States. There is strong belief that if only we are scientific and careful and thorough enough we will find the one method that will work with all children. In reality, all methods that we have investigated failed to teach some children to read. Children with severe problems, whether they be intellectual, emotional, physiological, or social, cannot reasonably be expected to learn to read through a system based solely on the method by which they are taught. Failure to recognize and account for individual differences is a major failing of all the specialized methods--i.e., code emphasis, linguistics, i.t.a., and materials centered approaches. The combination or eclectic method, since it subsumes varied approaches, comes closest of these to providing for individual differences.

With references to the components of a reading program discussed in the previous section, it is the opinion of the author that the eclectic approach comes closest to having the elements necessary to provide each child with a total reading program.

Organization and Management

A well organized program is founded on an established sequence of essential skills. Good management of the program requires the use of criterion referenced tests and a record keeping system to provide feedback to teachers to guide future instruction and grouping. Experience has also shown the necessity of keying materials to the sequence of skills so that practice materials for each skill will be readily available following instruction. These are the basic elements of a continuous progress program.[26] Continuous progress is possible only if there is a curriculum sequence to follow and progress through that sequence is carefully monitored.

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[25] Maxwell and Temp. Op. Cit. p. 106

This type of program is not to be confused with those programs labeled "continuous progress" where the only apparent change is that the grade-level designation of the books used has been replaced with a different numbering system, but the practices themselves remain unchanged. The important difference is in the concept of mastery learning.

What is mastery learning? According to Block,[27] mastery learning is an instructional philosophy that asserts that virtually all, rather than some students can learn most of what they are taught. It is assumed that most students can attain a high level of learning capability under the conditions associated with mastery learning.

The concept of mastery learning arose from the work of John Carroll[28] who proposed that time, not achievement, is the important variable in learning. He made it clear that by "spending time," he meant actually spending time on the act of learning. "Time" was therefore not "elapsed time" but actual "learning time."

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[26] New England Consortium for the Right to Read. Focus on Excellence.

[27] Block, James H., ed. Mastery Learning: Theory and Practice. New York: Holt, Rinehart, and Winston, Inc., 1971.

[28] Carroll, John B. "A Model of School Learning," Teachers College Record, 64(1963), 723-733.

He viewed time from two perspectives: time needed and time spent. The factors affecting the time needed to learn were thought to be related to the student's aptitude for learning, ability to understand instruction, and the quality of instruction. On the other hand, the time actually spent in learning was conceived to be a function of the opportunity to learn or expressed another way, the time allowed for learning, and the student's perseverance, or the time the student is willing to spend on learning.

In this model, Carroll saw the degree of learning as a function of the time actually spent divided by the time needed.

$$\text{Degree of learning} = f\left(\frac{\text{time actually spent}}{\text{time needed}}\right)$$

The basic assumption underlying this model is that most students can attain a high level of learning capability under the conditions associated with mastery learning. Bloom,[29] Block,[30] and others have done extensive experimentation to test out the value of this model in actual practice. The following conditions are considered necessary for mastery learning to take place, based on the accumulated findings from these studies:

1. Systematic instruction--knowing what it is you want to teach (what concepts and skills you want students to achieve) and teaching them in an orderly sequence.
2. Frequent checks on student learning -- giving diagnostic or criterion referenced tests to find what students have and have not learned.
3. Immediate help with learning difficulties -- providing additional instruction and practice for students when and where they have learning difficulties.

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[29] Bloom, Benjamin S. "Learning for Mastery," UCLA--CSEIP *Evaluation Comment*. 1:2:68.

[30] Block. Op. Cit. p. 8

4. Sufficient time for mastery learning to take place -- pacing instruction and practice so that students reach an "A" level of performance (or whatever criterion for mastery is established) on each concept and skill in the sequence before moving on.
5. A clear definition of mastery -- having a written statement of what students must be able to do to achieve mastery.
6. A record-keeping system -- keeping track of where all students are in the established learning sequence.

These conditions are considered necessary as they shift the burden of performance from the student to the school. That is, when the concept of mastery learning is applied, the school is made responsible for providing instruction that meets students' needs. That would entail checking students' readiness to begin particular instructional activities, providing instruction in an orderly sequence with the pacing of instruction adjusted to provide the time each student needs for practice before going on, giving frequent diagnostic or criterion-referenced tests to check on mastery, etc. To be sure, this kind of instruction requires more knowledge of the structure of the curriculum and more record keeping on the part of the teacher, but the procedures have the potential for a high degree of success.

In what subject areas can the mastery learning concept be applied? Mastery learning is successful in subjects that have a core of concepts and skills that can be sequentially organized. In reading, the word analysis skills, basic vocabulary development and certain comprehension and study skills can be sequentially arranged. In math, computational skills and concepts are learned in an established sequence. Other content areas have basic concepts and technical vocabulary that may be introduced in an established sequence. These are eligible areas for the application on the mastery learning technique.

Mastery learning is not appropriate for all learning, it has been found, but it is particularly applicable to the basic skills which all students need for success in school and in life.

Research on mastery learning. Block[31] has collected and reported numerous abstracts of research on mastery learning. They include the following:

> Studies done by Airasian,[31] Biehler,[32] Block,[33] Keller,[34] Kersh,[35] Kim,[36] Sjogren[37] and Wright[16] provided evidence that mastery learning techniques greatly increase the number of students who achieve mastery of learning tasks. Yeager and Kissel[38] showed that a student's initial state of readiness for the task was related to the time required to learn it but that the student's I.Q. score was not predictive of the time it would take. Payne found that students' sixth-grade arithmetic scores can be predicted from their performance as much as four years in advance (Grade 2) and recommended that mastery learning begin early in the elementary

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[31] Airasian, Peter. "An Application of a Modified Version of John Carroll's Model of School Learning." Unpublished Master's Thesis, University of Chicago. 1967.

[32] Biehler, Robert. "A First Attempt at a 'Learning' for Mastery' Approach." Educational Psychologist, 7:3:7-9.

[33] Block, James. "The Effectis of Various Levels of Performance on Selected Cognitive, Affective, and Time Variables." Unpublished dissertation, University of Chicago. 1970.

[34] Keller, Fred. "Goodbye Teacher..." Journal of Behavior Analysis, 1:79-89

[35] Kersh, Mildred. "A Strategy for Mastery Learning in Fifth-Grade Arithmetic." Unpublished dissertation, University of Chicago. 1970.

[36] Kim, Hogwon, et al. A Study of the Bloom Strategies for Mastery Learning. Seoul: Korean Institute for Research in the Behavioral Sciences. 1969.

[37] Sjogren, Douglas. "Achievement as a Function of Study Time," American Educational Research, 4:337-44.

[38] Yeager, John and Mary Ann Kissel. An Investigation of the Relationship Between Selected Student Characteristics and the Time Required to Achieve Unit Mastery. Working Paper No. 46, University of Pittsburgh, Learning Research and Development Center. 1969.

school to provide a series of successful and rewarding experiences. Atkinson[39] and Glaser[40] have shown at two different age levels that top students learn five or more times as fast as poor students. These and many other studies support the utility of Carroll's model.

The work of Merrill[41] and Thompson[42] tested whether the corrective instruction needed to be specific to the difficulties students were experiencing or whether it could be in the nature of a general review of previously learned material. In both instances it was found that specific corrective help produced greater gains in scores. (This finding is of particular relevance to Title I programs.) Also, Glaser[43] and Gagne[44] found that time at succeeding stages of instruction was reduced when the early stages were mastery learned, indicating that corrective help early in the educational experience will bring about a closer-to-normal rate of learning at later stages.

Ausubel[45] strongly supports the importance of early learning. He proposed that the learning deficits found in culturally deprived children are caused by the lack of opportunities to learn the necessary skills during their early stages of development. This lack of readiness for school experiences limits the benefits they derive from them. Particularly affected areas were found to be: abstract thinking, test-taking skills, vocabulary and level of motivation. He recommends emphasis on mastery learning of sequentially arranged learning tasks beginning with early readiness stages. Successful achievement should then provide intrinsic motivation.

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[39] Atkinson, Richard. "Computer-based Instruction in Initial Reading." In Proceedings of the 1967 Invitational Conferences on Testing Problems. Princeton: Educational Testing Service, 1968. pp. 55-67.

[40] Glaser, Robert. "Adapting the Elementary School Curriculum to Individual Performance." In Proccedings of the 1967 Invitational Conference on Testing Problems. Princeton: Educational Testing Service, 1968. pp. 3-36.

[41] Merrill, M. David et al. "Specific Review in Learning a Hierarchical Imaginary Science." Journal of Educational Psychology. 61:70:102-9.

[42] Thompson, R. B. "Diagnosis and Remedial Instruction in Mathematics," School Science and Mathematics. 41:41:125-8.

[43] Glaser. Op. Cit.

[44] Gagne, R. M. and N. Paradise. "Abilities and Learning Sets in Knowledge Acquisition," Psychological Monographs, 75:61:14.

[45] Ausubel, D. P. "How Reversible Are the Cognitive and Motivational Effects of Cultural Deprivation? Implications for Teaching the Culturally Deprived Child." Urban Education, 1:64, 16-38.

Behr[46] found that a particular element of the curriculum may require very different aptitudes, depending on the instructional mode (e.g., figural or verbal) in which it is taught. Findings argue for attention to students' modality strenghts for learning. Anthony's[47] work supports the need for a variety of instruction materials, too.

Silberman[48] found that brighter students are less affected by deficient programs of instruction. But, this finding must be reconsidered together with the work of Yeager and Kissel[49] who showed that a student's initial state of readiness was more important that I.Q. and the work of Kim[50] who showed that 50 percent of the students with I.Q.'s below 93 attained mastery during the time frame of his experiment while only 8 percent of the control students in that I.Q. range did that well. Block[51] interprets these findings to suggest the powerful effect that feedback tests and corrective procedures have on students' learning when used to supplement original instruction. Apparently this occurs at all I.Q. levels providing readiness for the learning task is present.

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[46] Behr, Merlyn. "A Study of Interactions Between 'Structure-of-Intellect" Factors and Two Methods of Presenting Concepts of Modulus Seven Arithmetic." Unpublished dissertation, Florida State University. 1967.

[47] Anthony, Bobbie. "The Identification and Measurement of Classroom Environmental Process Variables Related to Academic Achievement." Unpublished dissertation, University of Chicago. 1967.

[48] Silberman, H. and J. Coulson. Final Report: "Use of Exploratory Research and Individual Tutoring Techniques for the Development of Programing Methods and Theory." Santa Monica, Cal.: System Devel. Corp. 1964.

[49] Yeager and Kissel. Op. Cit.

[50] Kim. Op. Cit.

[51] Block. Op. Cit.

The research reveals a clear relationship between a student's academic performance and progress and both his/her self-concept and mental health. Self-concept derives from an individual's perception of the evaluations that significant persons make of him/her. To a student, a teacher is a significant person. Teacher comments and grades have been found to have a stronger effect on student self-concept and mental health than standardized test scores. Some studies related to this thesis include the following: Brookover et al.[52] found that self-concept and achievement are positively and significantly related and that self-concept can be changed. They suggest that changes in self-concept should result in changes in performance. Feather[53] concluded that the expectation of success or failure effects learning. Sears[54] found that a student's prior success or failure had an important influence on his/her expectations of later success and actual performance. And, Stringer and Glidewell's[55] results indicate that long-term success immunizes an individual against mental illness whereas consistent failure makes one vulnerable to mental health problems.

Summary of master learning research. Mastery learning strategies have been used in innumerable studies (50 or more) and have been found to work equally well at upper grade levels with one teacher to 20 students or one teacher to 70 students. The results of these studies show:

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[52] Brookover, W. B. et al. "Self-concept of Ability and School Achievement." Sociology of Education. 37:64:271-78.

[53] Feather, N. J. "Effects of Prior Success and Failure on Expectations of Success and Subsequent Performance." Journal of Personality and Social Psychology, 3:66:287-98.

[54] Sears, Pauline. "Levels of Aspiration in Academically Successful and Unsuccessful Children." Journal of Abnormal Social Psychology. 3:66:287-98.

[55] Stringer, L. A. and J. Glidewell. Early Detection of Emotional Illnesses in School Children. Final Report. St. Louis, Mo: St. Louis Health Department, Division of Research and Development. 1967.

1. In general, three-fourths of the students learning under mastery conditions have achieved to the same high standards as the top one-fourth learning under conventional, group-based instructional conditions.

2. In studies where a strategy for implementing mastery learning has been refined and tried again, 90 percent of the mastery learning students have achieved as well as the top 20 percent of the non-mastery students.

3. Mastery learning students have exhibited much greater interest in and positive attitude toward the subject learned than non-mastery students.

4. Students differ greatly in the rate at which they learn a given subject or task (some require 5 to 6 times as long as some others) and a student's rate may vary from subject to subject or task to task.

5. A student's verbal ability correlates significantly with his/her learning rate. Less verbally able students require longer to achieve a given task.

6. The quality of instruction affects both student learning rate and achievement level. High quality instruction makes all students' learning more efficient.

   Research results suggest that quality of instruction is best defined by:

   1) the clarity and appropriateness of the instructional cues for each student

   2) the amount of participation in and practice of the learning by the pupil

   3) the amount and types of reinforcements given to each learner

   4) the use of a variety of methods and materials

   5) teacher verbal ability

   6) type of feedback information available to both teacher and student on the progress of learning

   These findings suggest that instruction is defective to the extent to which students' individual differences in intelligence, aptitude, etc., are reflected on the achievement measure.

7. Student perseverence or persistence at a task varies (probably due to prior history of success or failure) but it may be

increased by positive reinforcement, learning success and improvement in the quality of instruction.

8. Time is an important variable in learning. A student's learning rate can be predicted by a standardized aptitude test or by a pretest on the material to be learned. Research also shows that spending enough time to achieve thorough mastery of the earliest units in a learning sequence will make student learning of later units more effective, efficient and progressively less dependent on additional help. Additional effort at early stages of learning will pay off later.

9. Research shows a clear relationship between a student's academic progress and his/her self-concept and mental health. Self-concept is partly derived from the individual's perception of the evaluations that significant people make of him/her. Teacher grades have a much stronger effect on self-concept than standardized test results. A teacher is a significant person in a student's life.

It is evident that one of the concepts in education most strongly supported by research is mastery learning. At the same time, it should be pointed out again that this model is not appropriate for all school-related learning. It works best in those skill areas that must be developed sequentially over a long period of time, such as reading and math. These also are the areas that are critical to life success and most in need of mastery learning techniques.

Mastery Learning and Title I

It seems to the author that if what is known about the Title I child and what is known about the concept of mastery learning are given joint consideration, a plan could be worked out that would help the Title I student achieve a larger measure of success.

Title I students are identified by several common characteristics:

1. Poor performance in school. Measures of achievement, whether they be oral or written check-ups or standardized tests, elicit poor performance from Title I students. Their lower-than-average achievement is one of

the obvious characteristics displayed by this group. They need a program that will be geared to the basic skills that they lack.

2. Low measures of verbal ability. Students who lack adequate vocabulary and language facility and who score low on indicators of verbal intelligence have been found to be the group that learns slowly. They need more learning time for each skill that is taught.

3. Lack school-related readiness. These children have had many experiences and learned many things but a smaller portion of their prior experiences is related to school than that of the average student. They need "learning to learn" experiences that would provide readiness for the planned learning sequence.

4. Lack ability to profit from the regular mode of teaching. In the classroom, most information is presented through the visual and/or auditory channels. Students must integrate the information coming in through those two channels to learn. Title I students learn poorly from this mode of presentation. Perhaps their low verbal ability is the problem. They may process the information they hear so slowly (or not at all) that they cannot keep pace with what they see. They need learning materials and activities that incorporate other sensory channels for reinforcement. A wide variety of materials must be available to meet their needs.

5. Lack experiences with success. These children have so seldom achieved success that they seem to lack motivation to succeed. It is success that breeds success.

Title I students need careful placement in the skills sequence, a mode of teaching by which they can learn (often one that incorporates motor activity), sufficient practice time for mastery, a wide variety of practice materials and positive reinforcement to increase motivation.

Mastery learning techniques can aid Title I students by establishing and maintaining a pattern of successful learning experiences. If the program is initiated early in the school experience and geared toward the obvious needs such as speaking and listening skills, specific reading readiness skills, etc. and a pattern of successful, mastery learning experience is established, Title I students' learning rates should improve in time so that they perform in a closer-to-average manner.

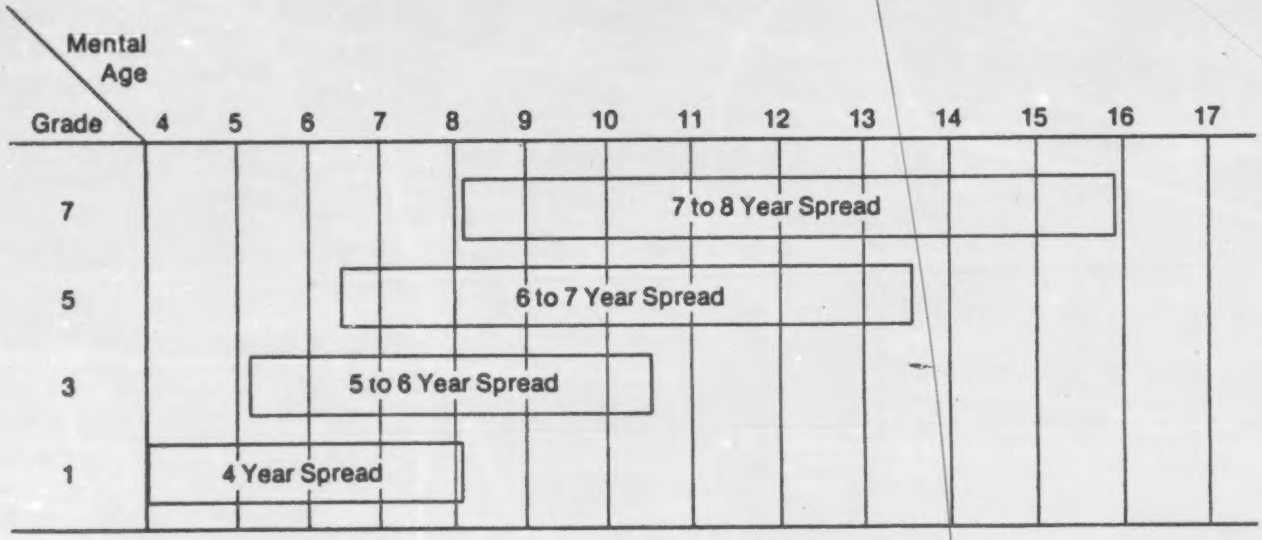
For this to work, the classroom and Title I programs should be closely correlated. Title I should provide the supplementary time and practice with a variety of materials so that students achieve mastery of the essential skills presented in the classroom. These essential skills must be identified and sequenced, readiness to learn them must be checked before instruction begins and the Title I teacher and classroom teacher must communicate often to keep activities correlated.

Title I teachers should reconsider early primary programs that have a heavy phonics orientation. Research shows that these programs tend to inflate test scores in Grades 1 and 2 but precipitate a drop in scores at higher grade levels, showing a lack of foundation skills in the area of reading comprehension. The reading program should always be kept in balance with emphasis divided across the components relevant to the student's level of development, e.g., sight vocabulary, word recognition skills, comprehension skills, interest in children's/young adult literature. (See chart on page 38). All of the "effective" programs assessed through the ERIC files were eclectic, with a heavier-than-average emphasis on comprehension, language experience, etc., where any imbalance was noted.

Phonics programs are not being discouraged. For six and seven year olds who have average perceptual abilities, phonics as other basic skills should be taught as part of a balanced program. However, many Title I students lack the perceptual ability to profit from phonics instruction until they are about seven. Spending an inordinate amount of time teaching these skills at six detracts from the development of language skills, listening and thinking skills that provide an important foundation for later learning. It is reasonable to assume that there is little profit in pronouncing words that are not known to the speaker. Vocabulary development, etc., should come first and then phonics. This rationale would not hold for older students.

In planning programs for early primary grade Title I students, it is important to keep in mind that the range of mental ages at any grade level is equal to two-thirds the average age of students in that grade. (Mental range = 2/3 average age in grade). For example, the average age of first graders is six. Two-thirds of six is four. Therefore, the average range of mental age in Grade 1 is four years. In other words, students in Grade 1 range from four to eight (a four year spread) in mental age. As a matter of fact, in any given class, there could be one child lower and one child higher than the average range. The following chart shows how the range grows at selected grade levels. Stanford-Binet data were used in developing this chart. The data were reported at a conference on Continuous Progress in Reading by Dr. Harry Sartain. The conference was funded by the New England Consortium for the Right to Read.

Mental Age Range at Selected Grade Levels



The importance of this finding is that Title I students are often at the bottom of the range. In planning programs for first grade Title I children, keep in mind that their performance may be closer to that of an average four or five year old. This helps to keep their needs in perspective.

Selection and Utilization of Materials

The need for a variety of materials was indicated in the previous section. Guidelines for developing criteria for selecting and utilizing a variety of materials were published by the new England Consortium for the Right to Read.[56] They are as appropriate for Title I as they are for the regular program. In fact, it would seem that some joint decisions would have to be made so that students benefit from an integrated program.

Materials should be selected based on two sets of criteria: program criteria and student criteria. Briefly stated, they might be listed as follows:

Program criteria

1. The basal program should be closely attuned to the philosophy of the reading program.
2. Materials should be coded to the sequence of essential skills. New purchases should be made to fill gaps noted.
3. Materials should reflect the methodology or mode of presentation of the teacher.
4. Materials should reflect the approach to reading used by the teacher.

Student criteria

1. Materials should reflect the special characteristics of the school population.
2. Materials should match students' independent and instructional levels.
3. Materials should be available in sufficient quantity to provide many options for students with slow learning rates.
4. Materials should be available that suit students' preferred learning modalities.

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[56] New England Consortium for the Right to Read. Selecting and Utilizing Materials. Kingston, RI: URI. 1976.

5. Materials should be available that reflect students' interests.

In using materials, Title I teachers should be especially careful to determine if students can be assured success with them. One of the most pressing needs of Title I students is to build up a history of success. The importance of this has strong implications for materials usage for the future.

EVALUATION

History of Title I Evaluation

Title I has been under attack since its inception for many reasons. Among them looms the high price tag it carried. Any program that authorized the spending of billions of dollars would attract a following of "sidewalk engineers" to monitor its progress. Furthermore, this program launched an educational attack on a social problem. Many questioned the rationale on which it was based. The notion that money was expected to stimulate reform from within the system was also open to question. At the time the Title I program was legislated, it was more than just a saying that it took 50 years for a promising idea to beat its way through the classroom door. Schools were seen as relatively unchanging institutions, thus many groups watched as the dollars began to flow.

The proponents of the legislation, too, were concerned that the money be well spent. For that reason an evaluation requirement was built into the original legislation as a tool for reform to:

1) generate change at the local level in the way poor children are educated and
2) make federal management of education programs more efficient

McLaughlin studied the Title I evaluation efforts undertaken between 1965 and 1972 to find out why Title I programs have been so heavily criticized. She sought reasons for the failure of the program to meet the expectations of its proponents. The following section is an overview of her report. Reference to the original report is recommended. This section is followed by a summary of a more recent report of the Comptroller General of the United States.

McLaughlin[1] study. McLaughlin reports that there was little appreciation at the time the legislation was written of the political pressures that would arise to resist both kinds of reform, listed above. The climate was not conducive due to problems already encountered in the development of the National Assessment and opposition to evaluation from groups such as the American Federation of Teachers and the Council of Chief State School Officers. Therefore, when the guidelines for evaluation were written, the mandate to evaluate was weakened to placate opposing forces. As a result, most of the early evaluation reports were "impressionistic" and "anecdotal."

Early in 1967 the Tempo Division of the General Electric Company was commissioned by the USOE Bureau of Research to do a cost-benefit analysis of Title I. The report was subsequently known as the Tempo study. This study was urgent because the Coleman report and the report of the U. S. Commission on Civil Rights had raised doubts about the effects of schools. The Tempo report showed a slight improvement in the achievement of the lowest 10 percent of the pupils in the schools studied but otherwise slight declines. However, it is pointed out that the history of research in education shows that academic achievement is seldom affected by introducing a new strategy.[2] Therefore, it should not have been surprising that improvements in achievement were hard to document when the basis for Title I program design was "innovation," in conflict with what was known about educational factors.

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[1] McLaughlin, M. W. Evaluation and Reform: The Elementary and Secondary Education Act of 1965/Title I. Cambridge, Mass: The Ballinger Publishing Co., 1975.

[2] Stephens, J. M. The Process of Schooling. New York: Holt, Rinehart and Winston, 1967. p. 10

The outcome of the Tempo study caused problems for USOE. As a result, a new study was designed, *The 1968 Survey of Compensatory Education*, a collaborative effort by James Mauch of the Division of Compensatory Education and Alice Rivlin on the Staff of the Assistant Secretary for Planning and Evaluation. This study was likewise disappointing. The date revealed that:[3]

1) schools did select the lowest achieving pupils,
2) the rate of progress in reading skills kept pace with their historical rate of progress,
3) pupils were not progressing fast enough to catch up,
4) deficits grew progressively greater in grades 2, 4 and 6, and
5) that pupils who made higher gains were from higher socioeconomic families than those who made lower gains. Programs were not closing the gap.

The 1969 survey followed with few changes. Glass's data analysis showed again that family background was the strongest predicator of student achievement. (In this study, teachers judged that 43 percent of students enrolled in grades 2, 4 and 6 had a critical need for compensatory programs in reading. The data indicated that the greatest need for reading services was in the urban schools. According to data, twenty-two percent of urban schools were found to have 70 to 100 percent of pupils reading one or more years below grade level.) This report was never released.

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[3] Hecht, K. A. "Five Years of Title I Evaluations," a paper presented at an AERA meeting in Chicago, April 7, 1972. p. 10.

Hartman followed by arguing against the attempt to measure Title I impact, urging that other questions be asked. In 1970, a National Institute of Education (NIE) was proposed as a focus for educational research and experimentation.

In the meantime, Froomkin, Assistant Commissioner for Program Planning and Evaluation, was pursuing alternative models of evaluation. In 1968, a contract was let to the American Institute for Research to do "It works" case studies of Title I programs. The final report, A Study of Selected Exemplary Programs for the Education of Disadvantaged Children, listed the following conclusions:

1. Good program design and effective guidelines establishing criteria were crucial to effective program evaluation.
2. Successful preschool programs all had certain common attributes:
    a) careful planning, including statement of objectives;
    b) teacher training in the methods of the program;
    c) small groups and a high degree of individualization; and
    d) instruction and materials closely relevant to the objectives.
3. Successful compensatory education at the elementary level largely depended upon:
    a) academic objectives clearly stated;
    b) active parental involvement, particularly as motivation;
    c) individual attention for pupils' learning problems; and
    d) high intensity of treatment.
4. "Successful" compensatory programs, in largest number focused on the provision of remedial reading services for elementary school students.

Froomkin's 1968 "It Works" study was expected to be popular as a source of effective practices. Little interest was displayed by local schools, however, and it was hypothesized that local school implementation of exemplary models may conflict with the more compelling administrative concern of maintaining the status quo. Martin Rein observed that evaluation will seldom be used if it challenges current practice. Therefore, while the AIR report produced positive findings, it did not stimulate reform.

In summarizing, Dr. McLaughlin indicated that Title I evaluations have been fraught with problems because:

1. It is difficult to evaluate a social program with such broad aims.
2. The 30,000 Title I projects across the country are very diverse in design and content.
3. The USOE has no direct control over the collection of data, and what is collected is more a reflection of local interest.
4. The evaluation requirement has led to anecdotal reporting and the accumulation of various data.
5. Evaluation efforts have undermined rather than strengthened support for Title I.
6. Information gathering goes on in spite of past results.
7. The educational policy system has been described as resistant to evaluation and reform.
8. Evaluation as a logic inquiry has been demonstrated to be part of a complex social and political system.

She concludes that "the structure and control of the nation's education system hampers all reporting, and it may preclude the accountability and impact reports reformers wanted."[4]

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[4] McLaughlin. Op. Cit. 119

1975 Report to the Congress.[5] During the years 1973 to 1975 about $1.8 billion was appropriated for the Title I program yearly. These funds were used principally to provide instructional services, more than half of which fell in the basic skill development in reading, as far as could be determined. For that reason, the General Accounting Office reviewed a selected number of Title I reading programs to determine:

1) the effectiveness of Title I in meeting students' reading needs and
2) the quality of its administration.

The review was made at OE headquarters, 7 HEW regional offices, 15 LEAs in 12 states, and the SEAs in these states. The states and LEAs were selected to give reasonable geographical coverage of the Nation and reasonable coverage of both urban and rural projects with different ethnic characteristics. The effort concentrated on fiscal year 1973. Many pertinent documents were reviewed and interviews conducted with parents, teachers and officials having responsibilities for the program. Also, classroom observations were made.

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[5] Comptroller General of the United States. Assessment of Reading Activities Funded Under the Federal Program of Aide for Educationally Deprived Children. Washington, D.C.: General Accounting Office. December 12, 1975.

The report states:[6]

> OE needs to improve its management of the title I program, particularly its evaluations, to provide greater accountability to the public and the Congress and to improve program effectiveness. Specifically, LEAs' evaluations need to be more consistent and comprehensive. We believe these problems occur primarily because OE has not developed a definite method for LEAs and SEAs to use in gathering, evaluating, and reporting program results. Also, the SEAs need to improve their monitoring efforts so that they will have more information for evaluating the quality of title I reading activities.

One source of difficulty with annual evaluations stemmed from lack of uniformity of LEA evaluations. Differences occurred in the test series used and the frequency of administering the tests. Furthermore, longitudinal evaluations, that would allow for judgments to be made regarding long-term effectiveness, were seldom considered. SEA and LEA officials' reasons for not making such evaluations were reported to be:

1) lack of comparable data, staff, and expertise
2) no requirement to do so and
3) student mobility.

The Comptroller recommended to the Secretary of HEW that "OE, in implementing the new program evaluation provisions mandated by the Education Amendments of 1974, ... include in the uniform reporting system information on (1) how many students are achieving at, below, and above grade level and (2) whether a sample of former Title I students are retaining the gains made while in the program." It was also recommended that SEAs strengthen their monitoring.

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[6] Ibid. p. 12

HEW concurred with the recommendations and said that:[7]

--A reporting format, being developed for use at local and state levels, will provide annual information on the number of participants who are achieving at, below, or above the level appropriate for their ages.

--A national study to determine the long-term effects of compensatory education programs, including title I, on participants was begun on July 1, 1975. As this study progresses, the feasibility of including information in the reporting system on whether a sample of former title I students are retaining the gains made while in the program will be examined.

--Annual program reviews of each State's title I administration include a critique of the monitoring done by the SEA. This procedure will be continued along with the practice of, both verbally and in writing, assessing the effectiveness of the State's effort in the areas observed, recommending modifications where necessary, and requesting the State to communicate the action it takes or plans to take to implement recommendations.

See Appendix D for a digest of the report.

The Literature on Evaluation

Evaluation is seldom a popular idea. But aside from the affective connotations that come into play, there are methodological questions raised.

Evaluation Models. Gordon,[8] for instance, challenges the commonly-used models taken from experimental psychology (the laboratory model) and industrial engineering (the input-output model). A point he makes is that designs stemming from these models assume that the researcher, or evaluator, knows what the product should look like when the project is successful, when it is not at all clear what students can become under ideal conditions. A second question he raises relates to the standardized test and the assumption that it measures an important outcome. In addition, the identification of a measure as a "posttest" seems to imply that the outcome is lasting and of functional utility. Side effects and long-range effects are seldom considered.

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[7] Ibid. p. 16

[8] Gordon, Ira J. An Early Learning: The Modifiability of Human Potential. ASCE/NEA, 1971.

Messick[9] suggests the medical model may be more appropriate, whereby "the prescription of the physician relates not only to the symptoms but also to everything he knows about the person with the illness," in contrast to the narrowly designed laboratory model. Process evaluation with frequent observations of what is going on is also seen as a promising alternative. Attention to teaching strategies, classroom interactions and the relationship between classroom events and outcome measures are described as needed for better understanding of teaching and learning.

Relationship between schooling and adult life. Some authors question what it is that schools are trying to accomplish. This, of course, would affect what is to be evaluated. Speaking from the position that public policy has attempted to improve the "life chances" of youngsters from low income and minority backgrounds primarily through schooling, Levin[10] proposes four hypotheses relating schooling to eventual adult occupation and income, each presuming a different educational approach and different mode of evaluation. The first hypothesis is based on the notion that education produces verbal and mathematical skills and other knowledge; that the more of these knowledges and skills children acquire, the greater will be their life attainment; and that the schools that produce the greatest gains in achievement as measured by standardized test scores have the greatest impact toward upward mobility of disadvantaged students. Standardized achievement testing is stressed as the best form of evaluation for this purpose.

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[9] Messick, J. "Educational Evaluation as Research for Program Improvement," Childhood Education, 46:8:413-14, 1970.

[10] Levin, Harry. "Education, Life Chances, and the Courts: The Role of Social Science Evidence, "Ch. 5 of Education, Inequality, and National Policy by Ashline, Pezzullo and Norris. Lexington, Mass.: D. C. Health and Co., 1975. pp. 73-100.

A second hypothesis stems from the belief that the school inculates students with appropriate behaviors for occupying particular positions in the occupational or organizational hierarchy. In this viewpoint, the value of the school is in its impact on noncognitive behaviors and these have been demonstrated to be related to grades teachers give moreso than to test scores. So, teacher grades would be the appropriate measure of the impact of schooling if success in life is to be measured by noncognitive behaviors.

A third hypothesis holds that schools perform a complicated sorting and screening process so that students can be assigned to an appropriate type of occupation. Through testing, grouping, tracking, programming, grading, and stratification of social classes by neighborhoods, the schools act as an enormous filter. Students with low-level skills and characteristics are put in slow tracks and provided with no incentive for learning. In contrast, students with high scores and personality attributes are encouraged through curriculum advantages and the reward system to seek higher education. This theory assumes that the amount of schooling is related to success in life. It also assumes that the major function of schools is not to educate but simply to screen and assign students to their proper places in the occupational structure. It is predicated on the belief that success in school is based on natural endowments and out-of-school factors. Here, the number of educational credentials one collects is the best measure, or predictor, of future success.

The fourth hypothesis is that schools can create better future opportunities for social justice and equal opportunity in the job market by _reducing social class and racial friction_. Desegregation, heterogeneous grouping, and multi-cultural curriculum offerings are looked upon as evidence that schools have assumed a role in this area.

Levin reports that there is little research evidence in support of any of these theories. While many studies have tested the first hypothesis, the acquisition of knowledge and skills, the findings are often conflicting. Only about 10 percent of the difference in adult income levels and 25 percent of the variance in occupational status have been found to be related to test scores. The relationship is weak. Currently, Levin feels that the skills approach "shows little promise of success because (1) available educational strategies have not demonstrated much success in improving test scores of these students and (2) increases in test scores show only modest effects on adult income and occupation."

In contrast to (1) above, Bloom[11] contends that good teaching techniques are the key to learning. He believes that almost all children (95%+) can achieve learning competency if teachers follow a mastery approach.

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[11] Bloom, Benjamin. _Human Characteristics and School Learning_, as reported in _Ed. News_, Teachers' Edition, September 23, 1976. p. 23.

Many studies have been conducted with good achievement results, although adult "success" has not been a factor in them.

As for the second hypothesis, Edwards[12] found that respect for rules, dependability and internalization of the norms of the workplace were strong predictors of supervisor ratings and income levels of employees. Gintis[13] drew similar conclusions and related these noncognitive behaviors to the way schools operate, with the teacher dispensing rewards and punishments accordingly. However, no evidence has been produced that indicates that schools can alter noncognitive behaviors through educational strategies. That area remains open for further testing.

In respect to the third hypothesis, three longitudinal studies[14, 15, 16] linking income with prior school experiences and test scores, showed a negligible relationship to standardized test scores individuals had achieved in school. However, the amount of schooling bore a pronounced relationship to ultimate income, seeming to support the third hypothesis describing the school as a sorting and screening institution. What remains to be tested here is whether schools simply sort and screen based on characteristics students already possess or whether schools can have an effect on developing those characteristics. Jencks[17] challenges the ability of schooling to overcome negative effects of social and economic deprivation. Among many educators, it should be noted, this is a much contested point of view.

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[12] Edwards, R. "Alienation and Inequality: Capitalist Relations of Production in a Bureaucratic Enterprise," Unpublished Ph.D. thesis, Harvard University, 1972.

[13] Gintis. "Education Technology and the Characteristics of Worker Productivity." American Economic Review. 61:266:1971.

[14] Ribich, T. & J. Murphy. "The Economic Returns to Increased Educational Spending," J. Human Resources, 1974.

[15] Wachtel, P. "The Effect of School Quality on Achievement, Attainment Levels and Lifetime Earnings," unpublished paper, New York Graduate School of Business, 1974.

[16] Sewell and Hauser. "Causes and Consequences of Higher Education: Models of the Status Attainment Process." Am. J. Agric. Econ. 54:851:1972.

Levin[18] also contends that there is a question as to whether schools can reduce the friction between the races and classes on a long-term basis, as hypothesis 4 states. Although positive outcomes are sometimes found, he states that other instances show neutral or negative effects. But it has been found, generally speaking, that marginally significant gains in cognitive skills may result for the low socio-economic group and better job opportunities for them, also, when they attend desegregated schools.[19]

Levin concludes by questioning the utility of empirical investigations, given the political and practical problems of their conduct in school settings. He suggests that social science research may be used more appropriately to frame the issues rather than to determine the solutions.

Testing problems. The type of evaluation selected has been shown above to be related to one's beliefs about the relationship between schooling and success in adult life. However, regardless of the philosophy underlying school practices, the standard method of evaluation is the norm-referenced test. It is generally assumed that if the project "works," some observable change will occur in achievement. The question then arises as to what extent intelligence or gains in achievement of Title I children can be accurately measured by a standardized test. Consideration of this question is important because of the diverse cultural and educational backgrounds these children bring to the learning task.

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[17] Jencks, Christopher. Inequality: A Reassessment of the Effect of Family and Schooling in America, as reported in Ed. News, Teachers' Edition. September 23, 1976. p. 23.

[18] Levin. Op. Cit.

[19] Ribich, T. and J. Murphy. Op. Cit.

Socioeconomic factors. Stone[20] showed that lower-class children have trouble not only with test items but also with the directions given for answering the problems. Haggard[21] demonstrated that class differences may be related to different levels of motivation for taking a test. While there is no dependable remedy for that, it must be recognized as a factor by researchers and evaluators. In addition to poor motivation, low socioeconomic status is related to slower development of language facility, lower level of parents' education, lack of career motivation, less press for school success, fewer home reading experiences, and greater discordance between school and home values, all of which affect test scores.[22, 23, 24]

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[20] Stone, D. R. "Certain Verbal Factors in the Intelligence Test Performance of High and Low Social Status Groups." Unpublished doctoral dissertation, U. Chicago, 1946.

[21] Haggard, E. "Social Status and Intelligence: An Experimental Study of Certain Cultural Determinants of Measured Intelligence." Genetic Psychology Monograph, 1954.

[22] Johnson, K. R. Teaching Culturally Disadvantaged Pupils. Chicago, Ill.: SRA., 1967.

[23] Wilson, A. B. The Consequences of Segregation. Berkeley, Cal.: Glendessary Press, 1969.

[24] Sexton, P. C. Education and Income. New York: Viking Press, 1961.

Surveys of compensatory education programs. Horst, Tallmadge and Wood[25] searched for effective compensatory reading and math projects. They reviewed, in all, 2000 of these projects, all of which had some sort of official recognition of success. Only six of them met the pre-established criteria of effectiveness, cost, availability and replicability. None of the evaluations provided acceptable evidence of success or failure, according to the authors. In all cases, problems in the conduct and reporting of the evaluations made the results inconclusive.

Other authors also question procedures in Title I evaluations. McDill, McDill and Sprehe[26] point out many limitations in these studies. Lack of available control groups, biased samples, noncomparable data with respect to grade level, different and unequal tests and test intervals were some of the problems cited. While many projects report gains of one month or more per month, a higher than expected rate for selected pupils, the authors feel that the results obtained in the evaluations are too unreliable to enable conclusions to be reached, generally speaking.

However, fifteen programs were found that were judged to be successful based on the criteria of:

1) quality of the research design and evidence of objective

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[25] Horst, Donald, G. Tallmadge and C. Wood. Measuring Achievement Gains in Educational Projects. Los Altos, Cal.: RMC Research Corp. October 1974.

[26] McDill, Edward et al. Strategies for Success in Compensatory Education: An Appraisal of Evaluation Research. Baltimore: John Hopkins, 1969.

results persisting over time,

2) objectives differing from those of other programs selected, and
3) accessibility for site visits.

It was concluded that:

1. Objectives should be clearly defined and systematic procedures and time schedules for the implementation of plans should be set up.
2. Instruction should be individualized through various means such as one-to-one relationships between teachers and students, tutors and computer assisted instruction.
3. Funds should be allocated at all maturational levels from pre-school through secondary and not concentrated merely at the pre-school level.

Despite the difficulties in documenting evidence of success, the authors point out: "No public school system in history has ever been abolished because it could not teach children to read and write, yet some compensatory programs, aimed at the very children who will probably be losers in the regular school programs . . . are being asked to succeed in less time than allowed the regular school system with minimal scientific evidence relevant to the problems of disadvantaged children and a lack of awareness of the magnitude of this task that confronts them."[27]

Another compensatory education program subjected to a heavy evaluation component is the Follow Through Program,[28] which is scheduled to terminate its last third grade classes in June 1977. Follow Through has been a research oriented project designed to find the most effective way to educate low-income children in the early grades. It was planned to build on the gains made by children in the Head Start program.

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[27] Ibid. p. 71.

Follow Through was not intended originally to be an experimental program, but enough concern about what works in early childhood education was soon generated that a plan was developed to test out "planned variations" on a wide scale. The Stanford Research Institute (SRI) was selected to conduct the data collection and evaluation.

Educational researchers with promising approaches to early childhood education were invited to sponsor models. Communities were then invited to participate and choose a model to follow . By the fall of 1968, twelve sponsors of models were working in one or more communities. Programs ranged from cognitive development to emotional growth. In 1969, seven more models were added and three additional ones were tried in 1970 and 1971. These 22 Follow Through models fell into five broad categories:[29]

1. Highly structured: The models in this group emphasize programmed instructional techniques in highly structured educational environments.

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[28] Rivlin, Alice and P. M. Timpane eds. Planned Variation in Education: Should We Give Up or Try Harder?

[29] NSPRA. Compensatory Education: What Works To Help Disadvantaged Pupils, an Education U.S.A. Special Report. Arlington, VA.: National School Public Relations Assn., 1973.

2. Discovery: These models focus on the child's initiative in learning and development of academic skills through promoting exploration and discovery.
3. Eclectic: The concepts of these models vary. In general, they include diverse elements ranging from open-ended inquiry to structured teaching of specific academic skills.
4. Self-sponsored: This group includes models in which the local school district staff has played the role of curricular architect and developer of the project.
5. Parent implemented: Models in this category have no specific affiliation with a particular instructional approach. Differing in style and tactics, this group shares a commitment to high levels of parent participation in policy making and program planning.

The plan was to have those models identified as successful disseminated to schools for their use in educating disadvantaged children. Early results indicate that no one model has shown significantly superior results as yet. Findings are somewhat repetitive of the results of the First Grade Studies. By and large, children tended to learn those skills that are emphasized to a greater extent than children who have not had similar training.

It seems worth mentioning here that from 1969 to 1971, about two-thirds of the Head Start pupils were enrolled in a similar type of planned variation experiment with similar findings.

In April 1972 the Brookings Panel on Social Experimentation[30] sponsored a conference of experts on planned variation experiences. The "experts" were federal and local officials and scholars involved in the experiments. While participants had warm, positive feelings about their experiences and while the achievement of the children enrolled was substantial, no model could be judged as superior and evaluators were unable to identify ways to improve the education of young children from deprived homes. It was concluded, in hindsight, that clearer objectives, more time for planning and an improved experimental design were necessary for results to be meaningful.[31]

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[30] The Brookings Institution, Washington, D.C.

An outcome of this conference was a proposal for a five-stage process of development and testing of educational interventions. This recommendation grew from a consensus that finding more effective methods in education demands commitment of time and resources to a multistage process in which large-scale field testing of new models (such as Head Start and Follow Through) is a late stage, preceded by intensive development work on each model, small-scale testing, careful preparation for implementation, and special development of measuring instruments for both inputs and outcomes.[32]

Measuring Cognitive Achievement Gains

The experiments discussed in the previous section were federally funded projects intended to answer social policy questions. The results were clouded by problems related to the strict identity of treatment groups, prior interest of communities in a particular treatment or model, the absence of clear standards of success, the lack of information about implementation of treatments, questions of test validity and other design factors. Instead of providing information for policy formation at the national level, these multimillion dollar experiments raised more questions than they answered. It was imperative, it seemed, to improve project evaluation so that it would be possible to identify factors that work to improve the life chances of children from low-income homes. Undoubtedly, the newly proposed evaluation models for Title I grow out of the experiences of the past decade.

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[31] Rivlin and Timpane. Op. Cit.

[32] Ibid. p. 19

Regulations will require use of a common reporting format for standardized test data and suggested designs will eliminate some of the problems commonly experienced in project evaluation. To acquaint the reader with some of the problems a good design can obviate, the following section will give an overview of some common evaluation hazards. This will be followed by a brief description of proposed designs for measuring cognitive achievement gains.

Common evaluation hazards. Horst and Fagan[33] have prepared a brochure on the twelve common hazards in evaluation to set the stage for newly recommended evaluation procedures for Title I. A brief summary of them follows:

Hazard 1: _Use of grade equivalent scores_. G. E. scores provide an insensitive and in some instances a systematically distorted assessment of a project's impact. The three problems associated with their use are:

a. The concept is misleading. A score of 7.0 by a fifth grader does not mean he knows 6th and 7th grade math, for example. It's closer to say he does 5th grade math like an average 7th grader.

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[33] Horst, Donald and Barbara Fagan. _Common Evaluation Hazards: ESEA Title I Evaluation and Reporting System_, Technical Paper No. 14. Los Altos, Cal.: RMC Research Corp., October 1976.

b. Grade equivalent scores are not on an equal-interval scale. A score of 2.0 is not half of 4.0, therefore you can't average them. An average G.E. score is not interpretable.

c. Normative data for test standardization are usually collected at one time and the curve is smoothed to connect points that represent actual data. This procedure implies that learning proceeds evenly and uniformly, but there is no evidence this is the case. Forgetting in the summar makes the fall scores low causing the fall to spring gain scores to be inflated enough to make a project look better than it is. Unless tests are given at the time of year when they were normed, the curve fitting procedure introduces enough error to, invalidate the results.

Hazard 2: Use of gain scores. The use of gain scores is valid only when the originally inferior group outperforms the originally superior group. Otherwise, their use to correct for initial differences between groups is in question. Where two groups are different on the pretest and differences are real, they cannot be adequately adjusted. Where differences are due to sampling, raw score gains overcorrect for the differences and residual gain scores undercorrect. The best policy is never to use gain scores.

Hazard 3: The use of norm-group comparisons with inappropriate test dates. Tests must be given very close to the date on which they were normed if the project group is to be compared with the norm group. Otherwise, the score used for the norm group will be only a statistical projection. A projected score assumes that cognitive growth is even and linear. This is not the case and a distored impression is created. Also, the norms are too low at the beginning of the period and too high at the end when the norm tables cover three or four months. It is essential that testing be done within a few weeks of the norming dates.

Hazard 4: The use of inappropriate levels of tests. Test scores are valid only when students score somewhere near the middle of the test range. When most students get nearly all or hardly any of the items right, the score is invalid as it causes a ceiling or floor effect.

Tests should be selected on the basis of the achievement level of students not on the basis of their grade level. However, grade level norms should be used. The same level of the test should be used for pre- and posttesting.

Hazard 5: The lack of pre- and posttest scores for each treatment participant. While the impact of the project should be determined only on the basis of those students for whom there is pre- and posttest data, interpretation of the data should take into consideration the characteristics of those who dropped out.

Hazard 6: The use of non-comparable treatment and comparison groups. Groups whose performance is to be compared must be comparable on all relevant variables such as pretest scores, age, sex, race, socioeconomic status, etc. Even when pretest scores are the same, a procedure that pits volunteers against nonvolunteers results in very different treatment groups so that the comparison group provides an inaccurate estimate of what project participants would have learned without the project treatment. Assigning participants to groups on a random basis is the only way to avoid error in evaluation.

Hazard 7: *The selection of project participants based on pretest scores*. Scores from a test used to screen for project participants cannot also be used as a pretest score. It is well known that students who score the lowest on one test will test higher on retest. The opposite will occur with students who score the highest. This phenomenon, referred to as statistical regression, is a tendency for retest scores to move toward the mean. Rather than to incur this hazard, it is safer not to use pretest scores to select project participants, but separate tests.

Hazard 8: *The assembling of a matched comparison group after the project participants are selected*. Selecting students for a project and then trying to find a comparable nontreatment group leads to error. To work as comparison groups, both groups have to be equally representative of the population from which they are drawn or regression may act differently on them.

Hazard 9: *The careless administration or scoring of tests*. Norm referenced evaluation models require that tests be administered with strict attention to detail. Personnel should be trained to decrease the possibility of error due to inconsistency and carelessness. The same care must be shown for pretest and posttest administration.

Hazard 10: *The assumption that an achievement gain is due to the* treatment when, in reality, it could be due to some other factor. When gains are observed, every possible explanation should be examined before they are attributed to project impact. Other explanations exist which could provide likely causes: Hawthorne Effect, mobile population, new facilities, etc.

Hazard 11: The use of non-comparable pretest and posttest. There is no way to adequately compare pretest and posttest scores when different tests are given except through the use of the conversion tables in the Anchor Study. However, this procedure applies only to the eight most commonly used reading tests.

In comparison group evaluations the use of different pre- and posttests is acceptable if both meet certain standards. Using very different types of tests is greatly discouraged.

Hazard 12: The use of inappropriate formulas to estimate posttest scores. Posttest scores estimated on the basis of grade-equivalent scores, or intelligence scores are open to question. Referral to a national norm, using actual posttest scores of comparison groups or using a regression equation to estimate posttest scores yield appropriate scores for evaluating treatment effects.

Proposed evaluation designs. As a result of the disappointing outcome of Title I evaluation in the past, efforts that provided little data for federal social policy decisions, the RMC Research Corporation was awarded a contract to do a "Planning Study for the Development of Project Information Packages (PIPs) for Effective Approaches to Compensatory

Education."[34] Under that contract five evaluation models were developed for possible use in measuring the impact of compensatory programs. In August 1976 an RMC Research Corporation Report[35] shows those models reduced to three which may be used with either norm referenced or criterion referenced data. A new standard score, the normal curve equivalent (NCE) was also devised to provide a common metric for the purpose of analysis. The three models and this new metric are described briefly below.

Model A: Normed Referenced. In this model it is expected that the treatment group posttest scores will equal or exceed the standard score which corresponds to their pretest percentiles.

Model B: Control Group. In this model it is expected that the treatment group posttest scores will equal or exceed the posttest (or adjusted posttest) standard scores of the control group.

Model C: Special Regression. In this model it is expected that the treatment group posttest scores will equal or exceed the mean posttest score predicted from the comparison group regression line.

Normal Curve Equivalent: the new metric. The normal curve equivalent was developed to provide an equal interval metric for quantifying project gains. This score will replace the commonly used grade equivalent for reporting purposes.

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[34] Horst, Donald, G. Tallmadge and C. Wood. A Practical Guide to Measuring Project Impact on Student Achievement. No. 1 in a series of monographs on evaluation in education. Wash.: Gov't. Printing Office, 1975.

[35] Bessey, Barbara et al. Further Documentation of State ESEA Title I Reporting Models and Their Technical Assistance Requirements/Phase I. RMC Research Corp., 1976.

Proposed reporting requirements. RMC proposes the collection of six types of information:

Pupil Participation - an unduplicated count

Parent Advisory Councils - report of building and district PAC participation

Personnel - the number of salaried personnel in full-time equivalents

Training - report of topics covered and hours spent

Cost - a separate form containing all costs for each project

Impact - completed forms corresponding to the selected evaluation model

Technical Assistance. Ten Technical Assistance Centers have been set up across the United States to provide LEAs with help in selecting and implementing one of the proposed evaluation models. These Centers can be contacted through the Title I SEA Office. They will be prepared to provide assistance on all aspects of evaluation including activities such as model selection, reporting and needs assessment.

Conclusion. Title I was designed originally to have a research and evaluation component to stimulate reform and provide direction for schools as they initiated programs in compensatory education. Due to the prevalence of a negative attitude toward evaluation, that section of the guidelines was so watered down before the program got underway that data from it have been useless to bureaucrats and layment alike who are looking for significant factors in programs to improve the school performance of the disadvantaged. Now the Congress intends to take steps to improve the knowledge base needed for program development.

They plan to require a report from each SEA annually that they can use for policy decisions. Proposed models, a common metric and a common list of reportable data are being considered. It is hoped that these measures will correct the lack of systematic data reporting characteristic of past evaluation efforts.

Appendix A

ALABAMA R_2R CRITERIA

	DELPHI II STUDY	SUPPORT BY LIT. SEARCH
I. ORGANIZATION AND ADMINISTRATION		
A. PROGRAM		
1. SCOPE AND SEQUENCE OF SKILLS	5*	HS
2. COORDINATION AND ARTICULATION OF PROGRAM	15	SL
3. INDIVIDUAL RECORD KEEPING	7*	HS
4. COORDINATION WITH PRESCHOOL	19	SI
5. A B E COMPONENT	26	SL
6. CONTINUOUS READING PROGRAM INCL. SUMMERS	23	SL
7. INCENTIVE FOR STAFF DEVELOPMENT	21	SI
8. MEDIA CENTER ACCESSIBLE	10*	HS
9. TESTING SYSTEM	16	HS
B. STAFF		
1. VARIETY OF STUDENT-TEACHER RATIOS	6*	HS
2. CONTINUOUS STAFF DEVELOPMENT	17.5	HS
3. TRAINING FOR CONTENT AREA TEACHERS	9*	HS
4. TRAINED VOLUNTEER HELPERS	24	DS
5. MEDIA CENTER STAFF	14	HS
6. DIRECTOR OF READING	12	HS
C. COMMUNITY RELATIONS		
1. REPORTING TO PARENTS	17.5	SI
2. REPORTING TO COMMUNITY	25	HS
3. SHARING INSTRUCTIONAL MATERIALS	11	SL
II. INSTRUCTION		
1. J & S HI TEACHER KNOWLEDGE	20	HS
2. INDIVIDUALIZED INSTRUCTION	1*	HS
3. POSITIVE ENVIRONMENT	2*	SI
4. USE OF A VARIETY OF METHODS AND TECHNIQUES	3*	HS
III. FACILITIES AND MATERIALS		
1. SUPPLEMENTARY READING MATERIALS	4*	HS
2. MATERIALS REFLECT -- RACE, COLOR, SEX	22	SI
3. SUPPORTIVE MEDIA	8*	HS
4. CENTRAL LOCATION FOR READING MATERIALS	13	SL

KEY:
HS -- HIGH SUPPORT
SI -- SUPPORT BY INFERENCE
DS -- DIFFERENT THAN STATED
SL -- SMALL AMOUNT OF LITERATURE

Appendix B

COMPARISON OF DELPHI II
RANK ORDER OF CRITERIA
AND HIGH SUPPORT IN LITERATURE

RANK	CRITERIA	HIGH SUPPORT IN LITERATURE
1.	INDIVIDUALIZED INSTRUCTION	*
2.	POSITIVE ENVIRONMENT	
3.	USE OF A VARIETY OF METHODS AND TECHNIQUES	*
4.	SUPPLEMENTARY READING MATERIALS	*
5.	SCOPE AND SEQUENCE OF SKILLS	*
6.	VARIETY OF STUDENT-TEACHER RATIOS	*
7.	INDIVIUDAL RECORD KEEPING	*
8.	SUPPORTIVE MEDIA	*
9.	TRAINING FOR CONTENT AREA TEACHERS	*
10.	MEDIA CENTER ACCESSIBLE	*
11.	SHARING INSTRUCTIONAL MATERIALS	
12.	DIRECTOR OF READING	*
13.	CENTRAL LOCATION FOR READING MATERIALS	
14.	MEDIA CENTER STAFF	*
15.	COORDINATION AND ARTICULATION OF PROGRAM	
16.	TESTING SYSTEM	*
17.	CONTINUOUS STAFF DEVELOPMENT	*
18.	REPORTING TO PARENTS	
19.	COORDINATION WITH PRESCHOOL	
20.	J & S HI TEACHER KNOWLEDGE	*
21.	INCENTIVES FOR STAFF DEVELOPMENT	
22.	MATERIALS REFLECT -- RACE, COLOR, SEX	
23.	CONTINUOUS READING PROGRAM INCLUDING SUMMERS	
24.	TRAINED VOLUNTEER HELPERS	*
25.	REPORT TO COMMUNITY	
26.	A B E COMPONENT	

IMPROVEMENTS NEEDED IN SELECTING PROGRAM PARTICIPANTS

Accurately identifying and selecting children to participate in the title I program and retaining them in the program until they reach grade level is essential to insure that services are provided to those children whom title I is intended to serve. Generally the LEAs' bases for selecting program participants were not adequately documented, which sometimes made it impossible to determine if the participants were eligible. Some LEAs provided title I services to non-educationally deprived children or to children who were not the most educationally deprived. Also several LEAs did not retain children in the program until they reached a reading level equal to their grade level.

A fundamental difference in interpretation of the program requirement to serve the most educationally deprived students exists among LEAs. One interpretation is that as long as a student is among the most educationally deprived when entering the program he or she can be retained in the program until reaching grade level. Another interpretation is that a student has to remain among the most educationally deprived to be retained in the program; otherwise, he or she will be replaced by a student who is more educationally deprived.

SELECTION OF PARTICIPANTS

OE regulations require that LEAs select the most educationally deprived children for title I projects. Allowed to develop their own selection methods, LEAs adopted various methods which, in some instances, provided little assurance that the most educationally deprived children were selected. Adding to this problem was the inadequate documentation of LEAs' selection criteria. This precluded any objective evaluation of whether only eligible children were selected.

The selection methods used by the 15 LEAs we visited can be grouped into 3 categories:

--Four used only objective data and required that standardized achievement tests be used to identify children reading below their grade levels. One of these adopted a "saturation" policy whereby all students in a school area were served.

--Two used only subjective data, such as teachers' recommendations.

--Nine used a combination of objective and subjective information, such as test scores, diagnosed learning or physical disabilities, teachers' and principals' judgments, and school attendance data.

Examples of problems in selecting students follow.

One school selected students for reasons other than low reading proficiency. Of 25 students' test scores in our sample, 12 were ineligible on the basis of the LEA's criterion of reading more than 1 year below grade level. School officials said that homeroom teachers had selected participants and that these teachers had used title I as a "dumping ground" for disciplinary cases, hyperactive students, and other students who otherwise were not eligible for title I. For example, one fifth-grade student, whose test score showed him to be reading 6 months below grade level, was recommended by his homeroom teacher for remedial reading in the hope that this would cure his hyperactivity.

Test scores of all students not enrolled in title I reading at this school showed that 32 read at more than 1 year below grade level, with the reading gap ranging from 1.1 to 2.8 years. According to school officials, some of these students were not recommended for remedial reading either because the teachers or the parents considered it degrading or because the homeroom teachers did not believe they needed it. Several other LEAs had emphasized subjective information over available objective data in selecting title I reading participants.

SEA and LEA officials differed on the importance of objective versus subjective information in selecting participants. Some officials said the use of objective data, such as standardized achievement test results, was necessary for selecting participants with reasonable accuracy. Other officials said that, because achievement tests were not infallible and might be misleading, the judgments of teachers and other school personnel should be relied on.

Another LEA selected better readers over poorer readers on the basis of subjective, undocumented data. Its project application included data showing that, of 1,390 students in title I public schools, 406 had reading test scores that ranged from 4 months to 2.5 years below grade level. A total of 365 public school students were selected to participate in the title I reading activity. Considering only objective data, the lowest achievers should have been selected from the 406 students. However, our review of test scores of 73 project participants showed that 28 were not among the

406 lowest achievers. The director of this project said that the LEA had also considered teacher and counselor referrals in selecting participants and that the LEA should have documented its reasons for selecting participants whose scores exceeded the eligibility criteria. Another official of this LEA said that test scores were not always valid when applied to children of different ethnic backgrounds.

The SEA title I director, overseeing this LEA, told us that, because test scores were not infallible, teachers' judgments became an important factor in the final selection of participants and that selection on this basis simply meant that the teachers determined whether the children's achievement levels, based on performance in the classroom, were below average.

At another LEA, entire student populations were served by the title I teaching staffs because of the SEA's saturation policy for certain public elementary schools. The SEA had determined that poverty and manifested educational needs were so intense at some schools that they must be saturated for maximum effectiveness. Accordingly, the SEA directed some LEAs to reduce the number of schools in their title I programs and to serve all students in selected target schools.

SEA officials contended that (1) when standardized tests showed that 70 percent of a population was eligible for the program, it was virtually impossible to exclude the small percentage of ineligible students and (2) the students who have relatively better test scores have some degree of educational deprivation resulting from poverty, neglect, and delinquency or from cultural and linguistic isolation from the general community. At the time of our fieldwork, 20 of the approximately 900 LEAs receiving title I funds in the State were following the saturation policy.

As a result of an OE title I review made in September 1972, OE recommended that the State discontinue the saturation policy. OE's review of student test scores at 15 schools showed that many eligible and seriously educationally deprived children had been denied program benefits and that less deprived students had received them. OE's position is that projects should be established in as many target schools as necessary, consistent with title I regulations, to insure that the most educationally deprived students are served first. During another title I review made in April and May 1975, OE found that both the SEA and the LEA were still following the saturation policy. In its review report to the SEA, dated September 22, 1975, OE recommended that the SEA take immediate steps to correct this situation.

Officials at one LEA in the State said that, in schools with heavy concentrations of low achievers, it is very difficult for the school's staff to arbitrarily distinguish between the needy and the most needy. Some LEA officials disagreed with the concept of serving the lowest achievers first. They believed the limited title I financial resources could be more effectively used if the least educationally deprived children were served first and brought up to their grade levels in reading in a shorter period. Doing this, in their opinion, would permit more time and staff to work with those children, at a later date, who have more serious reading problems. OE, however, maintains that the intent of title I is to concentrate resources on children with the greatest need.

RETENTION OF PARTICIPANTS

Although the intent of title I assistance is to raise participants' levels of educational achievement to those appropriate for children of their age, most of the LEAs reviewed did not continuously give title I services to the children until they reached these levels. The judgments of teachers and other LEA personnel often entered into decisions to release or retain students in title I reading or to reenroll former title I students.

One State recommended that title I students receive services for a minimum of 3 years. At 1 LEA in this State, 38 of 47 second through seventh grade students were dropped from title I reading even though they had not achieved their grade levels.

At another LEA title I participants were removed and replaced at various times during the school year. This was generally done at the discretion of LEA-funded teachers. LEA officials stated that LEA-wide guidelines should be prepared to insure uniformity in selecting, removing, and replacing participants.

At a third LEA, where the title I reading project served grades 1 through 8, students left the project when they were passed to the ninth grade, showed enough improvement to return to a regular classroom situation, or made no progress due to a lack of interest or ability. Students were returned to the project only if their reading achievement regressed.

At a fourth LEA title I students were retained in the reading project until they reached their grade levels and up to 1 school year afterward. The decision to extend title I services to students after they reached grade level was based on the judgments of the title I counselors and the teachers.

LEA officials believed this extension of services was necessary to maintain the children's reading achievement growth and to help alleviate possible regression.

Apparently to serve the most educationally deprived children, another LEA made a new selection of eligible children at the beginning of each school year. As a result, reading services were provided to most title I students for only a year or less and some students were dropped from the program before reaching their grade levels. On the basis of the judgments and recommendations of title I and regular teachers, a student could be removed from the program during the school year or retained for part of a second school year.

As shown in the last two examples, the requirement to serve the most educationally deprived children apparently can be interpreted differently. The interpretation is important because of its impact on the students' chances of achieving the national goal. By interpreting the requirement to mean that a student must be among the most educationally deprived only at the time of entering the program, LEA officials can provide services until the student reaches grade level or is passed to a grade in which title I services are not provided. However, by interpreting the requirement to mean that a student must always be among the most educationally deprived, he or she may be replaced by a student having a greater need before reaching grade level.

CONCLUSIONS

The LEAs could have improved their bases for evaluating title I activities if they had adequately documented the methods used in selecting participants. On the basis of available test data, some LEAs did not serve the most educationally deprived children and some served noneducationally deprived children. In selecting participants, many LEAs considered the recommendations of parents, teachers, and other school officials and on this basis might have been serving the most deprived; however, this could not be determined because of the lack of documentation.

Several of the LEAs did not retain students in title I reading activities until they reached their grade levels. If this practice is widespread, the national goal of closing the educational gap will not be achieved. Moreover, apparently the different interpretations of the program requirement to serve the most educationally deprived children has reduced some students' chances of achieving the national goal. These students were removed from the program because they were no longer among the most educationally deprived rather than being retained until they reached grade level.

RECOMMENDATIONS TO THE SECRETARY OF HEW

The Secretary should direct OE to:

--Emphasize to the SEAs the need for LEAs to document their bases for selecting program participants, to insure that the children whom title I is intended to serve are being served.

--Clarify its policy regarding serving the most educationally deprived as it relates to selecting and retaining students in the program.

AGENCY COMMENTS

HEW concurred in our recommendations and said that:

--The State Information Sharing system will provide States, and through them the LEAs, information on effective needs assessment practices, including the utility of appropriate documentation of the bases for participant selection. Further, it is expected that the new title I regulations will specify the local needs assessment process. In addition, the OE review team will monitor SEA and selected LEA implementation of the needs assessment procedures and will continue to emphasize to SEAs the need for LEAs to document the bases for participant selection.

--OE will continue to work with the SEAs both through annual program reviews and specific technical assistance visits to clarify even further the policy of providing title I services to children identified through educational needs assessment as being in greatest need until such children are achieving at a level appropriate for their age or until they are passed to a grade in which title I services are not available. Also, the policy will be more specifically covered in the new regulations which will be distributed to SEAs by OE and reviewed with LEAs by their SEAs.

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

ASSESSMENT OF READING ACTIVITIES FUNDED UNDER THE FEDERAL PROGRAM OF AID FOR EDUCATIONALLY DEPRIVED CHILDREN

Office of Education
Department of Health, Education, and Welfare

DIGEST

Title I of the Elementary and Secondary Education Act authorizes Federal financial assistance for programs designed to meet the special educational needs of educationally deprived children living in areas with high concentrations of children from low-income families.

The Department of Health, Education, and Welfare's (HEW's) Office of Education is responsible for administering the program at the national level. Each State's educational agency is responsible at the State level and local educational agencies are responsible for developing and conducting the special educational programs. (See pp. 1 and 2.)

Program activities have varied but emphasis has been on developing reading skills. (See p. 2.)

GAO reviewed special reading projects of 15 local agencies in 14 States (see p. 5) and found problems with the evaluation and administration of these projects.

GAO is recommending to the Secretary of HEW that the Office of Education be directed to:

--Include in the uniform reporting system to be implemented pursuant to the Education Amendments of 1974 information on (1) how many students are achieving at, below, and above grade level and (2) whether former title I students are retaining the gains made while in the program. (See p. 16.)

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--Encourage State agencies to strengthen their monitoring of title I projects. (See p. 16.)

--Give special attention to any problems local agencies have in making and documenting needs assessments. (See p. 20.)

--Emphasize to State agencies the need for local agencies to document their bases for selecting program participants. (See p. 27.)

--Clarify its policy regarding serving the most educationally deprived as it relates to selection and retention of student participants. (See p. 27.)

--Work closer with State and local agencies to help insure that program services are concentrated on educationally deprived children and that quality training and technical assistance are provided to program personnel. (See p. 30.)

--Develop a plan for disseminating information on exemplary activities and assist State and local agencies in establishing or improving their dissemination systems by giving them additional guidance and training. (See p. 35.)

--Continue to encourage State agencies to monitor the parental involvement efforts of local agencies and, where necessary, assist them in increasing involvement. (See p. 39.)

HEW agreed with GAO's recommendations.

GAO's recommendations were prompted by the following problems at the State and local levels:

--Although each local agency reviewed reported some reading improvement for the students sampled, available achievement data showed that most students were (1) not reading at levels sufficient for them to begin to close the gap between their reading level and the national norm, (2) widening the gap in their reading levels, or (3) not retaining gains made in title I after they left the program. (See pp. 6 and 7.)

--Fifty percent of the students' annual reading achievement rates were higher during participation in the program than before. Available data for making this determination was limited, however. (See p. 8.)

--The Office of Education has not required adequate information from State and local agencies for measuring the national impact of title I reading projects on improving students' achievement. The evaluations made generally have not contained uniform data and often have been incomplete. (See p. 12.)

--Some State agencies needed to improve their monitoring of title I projects. (See p. 14.)

--Some local agencies did not make and adequately document comprehensive assessments of the educationally deprived children's needs. (See p. 17.)

--Generally the local agencies' bases for selecting program participants were not adequately documented, some were not serving the most educationally deprived students, and several were not retaining students in the program until they reached grade level. (See pp. 22 and 25.)

--Some local agencies could have improved their title I reading services by concentrating them on educationally deprived children or by providing adequate inservice training to title I teachers and aides. (See pp. 28 and 29.)

--The Office of Education had not yet developed a systematic plan for disseminating information about exemplary title I projects. Also, none of the local agencies and only a few of the State agencies had formal dissemination systems. (See pp. 32 and 33.)

--Almost all of the local agencies needed to increase parental involvement in their projects. (See p. 36.)

Although GAO believes the above problems are applicable to many title I projects, its findings and conclusions are not necessarily typical of all title I projects. (See pp. 5 and 12.)